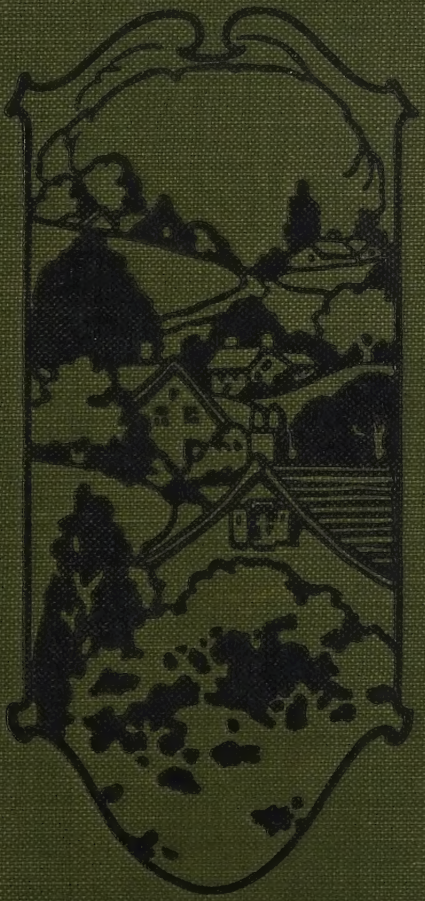
OUR NEIGHBORHOOD



JOHN F. SMITH

JN66
#300

Return S. K.
Dowling

WHAT ONE BOY HAS DONE

Helped by the instructions of the Department of Agriculture he raised 107⅓ bushels of corn on one acre.
Such young citizens are an asset to the neighborhood.

OUR NEIGHBORHOOD

GOOD CITIZENSHIP IN RURAL COMMUNITIES

BY

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ILLUSTRATED

THE JOHN C. WINSTON COMPANY
PHILADELPHIA CHICAGO

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PREFACE

It is generally conceded by educators that true American ideals must be created in the minds of our American youth while they are in the public schools. These ideals relate in a large measure to the duties which the young citizens must assume more and more as they grow up. Each will have to deal throughout life with groups of other people, and it is necessary that their attention be directed at an early age to some of the relations which they must experience.

While their attention is being directed to these things, it is necessary that they be taught to think in terms well known to them and their neighbors. As citizens they must think about roads, play grounds, pig clubs, courts, seed corn, taxes, game laws, community morals, prevention of waste, pure air and water, and the prevention of diseases among people and farm animals. Their skill in handling these and similar problems will be the measure of their civilization and progress. This is especially true of those who live on farms and in small country towns. The schools that do most for the young people of the countryside will devote much time to the definite things that are close to the door-step, things that concern men and women who expect to live in the country community.

This book has been prepared for the purpose of directing the attention of country boys and girls to some of the definite things they will have to do in later years as members of a community. It shows the splendid possibilities of the kind of community life that will keep boys and girls in the country where they can be independent and happy. Instructions of this kind will help to arrest the present unfortunate tendency of country youth to crowd into the narrowing and often squalid life of the city.

Moreover, it will help to meet the ever increasing need for the sane, vigorous, sound-moraled stock that has always been our best national asset.

The author writes from intimate personal knowledge of country life. For years he has met country youth in his class room and in their own homes, and has endeavored to learn what they most need in their preparation for useful citizenship. Far too many of the books used in the rural schools have been prepared by city teachers who have either forgotten or have overlooked the special needs of the country child. It is one thing to view the problems of country people from a window in a city office building and quite another thing to view them from the standpoint of the man who lives with country people and labors with them.

Like most of the newer types of text-books, "Our Neighborhood" is much more than a text to be remembered. While it gives much valuable information, applies scientific knowledge to country problems, and breathes the spirit of true progress, it also suggests numerous activities that will make its teachings practical. The questions in the text and at the ends of chapters will make the boys and girls think and act. It is obvious that no one pupil can answer all the questions. Probably no one class will write every paper or make every report called for. There is ample opportunity, however, for the teacher to select those questions and assignments best suited to his class and to enliven the work by making his class a real laboratory of community life.

Thanks are due to President Kenyon L. Butterfield, Dr. Warren H. Wilson, President William Gooddell Frost, and others whose personal views and rational plans for the improvement of country life have been constant sources of helpfulness.

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CHAPTER I

A Man and His Community

Definition of a Community.—We live at a time when the majority of people travel. The railroad, the trolley, the automobile furnish easy and pleasant means of transportation on land. On the ocean and inland waterways, great ships and boats provide equally comfortable accommodations for travelers. And far back in the mountains, the horse, the stage, and the wagon are the favorite means of conveyance. Modern methods of travel are so convenient and inexpensive that a journey of a thousand miles at the present time presents fewer difficulties than were formerly encountered in traveling fifty.

As people travel over the country, they find everywhere that the inhabitants of certain restricted localities have common interests. Farms are comparatively small, houses are close together, and each person knows all the other people for several miles around. There is usually one store to which all the people go for supplies. There, shoes, hats, garden seeds, kerosene oil, harness, farm implements, sugar—all the common necessities—are purchased. There, too, the farmers take eggs, honey, sorghum, beans, apples, and chickens to sell or exchange. In short, the people living about the store have a common interest in it.

If rural free delivery is not established in the locality, the postoffice is usually to be found in the store. It is to the store, then, that the people must go for their letters, papers, and parcel-post packages; and there, also, they mail letters to relatives and friends, and to

A COUNTRY BLACKSMITH

mail-order houses for the merchandise that cannot be bought at the store.

A blacksmith shop is usually in the vicinity of the store. The farmers from the surrounding country go to this shop to get their plows and other tools repaired, and to have their horses shod. The blacksmith has learned that it is good business to have his shop close to the store, because it influences people to have their work done while they are selling produce or buying

supplies. The farmers, too, find it a very convenient arrangement, because they can make one trip serve two or more purposes. They can leave a horse to be shod or a wagon to be mended while they purchase supplies, read the paper, or talk with friends who gather at the store for similar purposes.

There is one schoolhouse to which all the people send their children; one mill where they have their corn ground; one place where the voters cast their ballots; often only one church where the people gather to worship; and one graveyard where the dead are buried.

The occupation of all the people is usually much the same. In rural sections most people are engaged in farming. Even the doctor, the merchant, the preacher, and the teacher are likely to be farmers. They usually raise the same kind of farm produce. There are farms, for instance, in the middle West where wheat is the chief crop; others in the central states where corn is king; some in the East where grapes and apples receive greatest attention, or where dairying is of most importance; and still others in the South where cotton is raised almost exclusively. The farmers of an entire locality often produce the one chief crop because it is a common fashion to do so, and because the facilities for handling and marketing that one crop are better than those for marketing and handling others.

The interests of the people are knit together so closely, and their occupations are so nearly the same that what affects one family frequently affects all. If a drought injures the crops, all suffer from the same

cause and suffer in much the same way. If a late frost kills the peach crop, or if an early one destroys the cotton crop, all feel the loss. If San José scale or black rot affects one orchard, it is likely to affect many. If one farmer's hogs die of cholera, all the hogs in the surrounding territory are in great danger. If the teacher teaches a good school, it affects every family; if the pastor preaches a great sermon, all are helped.

We shall call such a place as we have described "a community."

A community, therefore, consists of a group of people living close together, maintaining mutual interests, and subject to the same physical and moral conditions. These people know each other and each other's business. They know each other's horses, cattle, and dogs. They visit with one another; they buy and sell at the same place or places. They work the roads together, vote together, worship together, and when they die, they are buried in the same graveyard.

How Community Affairs Are Knit Together.—We have learned that the interests of the people in a community are so woven together that what affects one individual affects many. This is true in equal measure of the things that do good and the things that do harm. When the miller buys a new set of millstones, or sharpens the old ones, all the people have better bread. When the blacksmith becomes sick of typhoid fever, all the farmers feel the loss of his labor. If whooping cough breaks out in one family, all the children who live near that family are

in great danger. If favorable weather enables the farmers to raise good crops, more money comes into the home to purchase better home comforts from the merchant, who, in turn, becomes more prosperous, can have a better stock of goods, and can contribute more to the school and the church. If one farmer sells a drove of fine cattle at a good price, he can lend money to a neighboring farmer to pay off a debt or to buy the equipment necessary to do better farming. From this same cattle-raiser a poor boy may borrow money to enable him to go to an agricultural college, where he can become a skillful farm demonstrator. On returning to his own county, he can lead the way in better methods of farming, and in the conservation of the soil and other natural resources.

The good things of the community are shared by all the people. All get the benefit of the school, the good roads, the church or churches. If a farmers' meeting is held, or a school picnic is proposed, all may go. If a grange society is organized, all may join. Each man has the benefit of the moral atmosphere created by estimable people. His house and property and the morals of his sons and daughters are safe, because those who live about him are honest, upright people. His children grow up in a community where all the neighbors try to make their homes places in which children may become good men and women.

What Each Man Owes the Community.—Now if each man enjoys all the benefits that the community has to offer, he, in turn, owes much to the community, and is in duty bound to do what he can to make life

pleasant for the people about him. If plans are made to improve the road, to clean up the barnyards and trash heaps, to build a better schoolhouse, to do anything that will help the community as a whole, it is his duty to do his part of the work. If he does not do his part, the plans cannot be fully carried out, and somebody is likely to suffer because of his negligence.

Let us see why it is best for everyone to work at a plan that will benefit everybody. Suppose the people start a campaign for painting or whitewashing outhouses and fences. All except one man paint their houses and whitewash their fences. This one man may be too stubborn or too lazy to do his part of the work. His lack of coöperation is commented on by the neighbors; his fences and out-buildings are talked about; and his good standing in the community suffers. Becoming angry, he may say and do things that humiliate his wife and children. Would it not be very much better for him to help the work along?

Again, a campaign may be started to clean up stables, barn lots, and other places where filth accumulates. The people want this done in order to destroy the breeding places of house-flies. Every man in the community except one enters this campaign with enthusiasm, and cleans up his premises. The flies continue to breed in this one man's stables and pigpen. What is the result? A child in the neighborhood is poisoned with germs carried on the feet of a fly, and becomes very ill. If the germs are those of enteritis, for instance, the flies that come from the uncleaned stables carry like germs to other homes; and other

children contract the disease. A child dies of this disease, and a deep grief comes into its home. The responsibility for the child's death rests upon the negligent farmer who refused to clean up his stables and so destroy the breeding place of the house-fly that carried the germ of enteritis.

Another plan may be made by farmers for improving the roads which pass their farms. If this work is done by everybody, all the people of the community will have good roads for travel. But if one farmer is too busy at something else, or is too indifferent to do his share, there will be a stretch of road not thoroughly repaired; and all the wagoners who haul over that road will have to make their loads no heavier than can be pulled over the worst place in the road.

VACCINATING THE HOGS TO PREVENT CHOLERA

All the farmers of the community should coöperate in these activities. If one refuses, the hogs of the entire neighborhood are in danger.

If hog-cholera breaks out on one farm, and the farmers make plans to fight the disease, it is plainly the duty of every farmer to assist in the fight. If any man fails to join in the plans, his hogs may become sick, and thus endanger all the others. If the black rot gets on one man's plum trees, everybody should make plans to fight against the disease. If one farmer fails to join the crusade and allows his diseased trees to stand, his orchard will become a breeding place for the deadly tree-disease

from which other trees, and even whole orchards, may become infected.

Thus, it may readily be seen that when the people as a whole attempt to do something to help the community, the coöperation of every individual is needed. If one man

ALMOST IMPASSABLE
A little work would repair this. Everybody waited for somebody else to begin.

fails to help, he may defeat the purposes of all the rest.

Besides this, each man enjoys the benefits that come from the combined efforts of the people about him. It is only right and just, therefore, that he should contribute his share of time and money to activities that help him and his family. It is his duty as a citizen of the community to do this.

The Community Program.—Some people are content to have repairs and improvements in the neighborhood neglected. They will drive through the same mudhole month after month; will open and close the same dragging gate, or let down the same drawbars;

COMMUNITY ROAD-MAKING

On the day this picture was made more than three hundred people were at work on this road.

will let weeds grow in the back yard, and chips, corncobs, and manure accumulate in the barnyard or near the house without making an effort toward improvement.

Other people, fortunately, are not like that. They want to see the community grow in prosperity; they want to help in making things look better. When a

gate begins to drag, they repair it, or replace it with a new one; when a bad hole begins to form in the road, they fill it up; and before the rubbish becomes too unsightly about the house or barn, they clear it away. They know that people can never be so healthy nor so happy when surrounded by rubbish and unsightly gates and fences, as they are when everything is kept clean and in good condition.

These latter people are exceedingly anxious to improve their surroundings. They keep everything in their own homes and on their own farms in good condition, and they want to see others do the same. They want an attractive community in which to live and to rear their children. They often suggest that all the people make certain improvements in their homes and farms. They make plans for improving the road, and ask all to take part. They suggest that more flowers and vines be planted in the yards, and invite all to coöperate in beautifying their home surroundings. They recommend that farmers spray their fruit trees at a particular time, or inoculate their hogs against cholera, or clean out all fence corners. Or, they may suggest that all the farmers begin to raise more wheat, or more apples or grapes, or that all endeavor to build silos of a certain type.

All such plans involving the coöperation of the people in the community are called *community programs*. Whenever the word program is used in this book, unless it is otherwise defined, it will have this meaning. It will be understood that it is a plan entered into by all or by a large proportion of the

people of a neighborhood for making certain improvements. The program, as we shall understand it, may be carried out in a week, a month, or a year; or it may require several years to carry it out. Whatever the length of time required, it is merely a plan by which the people work together for doing certain particular things, such as introducing crop rotation, buying and selling together, establishing coöperative credit societies, or fighting against diseases of farm animals, fruit trees, or people.

QUESTIONS FOR DISCUSSION

1. Why do you like to live in your neighborhood?
2. What are some of the best things you know about it?
3. Are all the people you know satisfied with their surroundings? If not, what do they object to?
4. What advantage to a good neighborhood is a good church?
5. Tell what you think a community would be like without a good school and a good church.
6. What do you think is the most important thing in your community? Is it land, houses, farm animals, or people? Give reasons for your answer.
7. Why should everybody want to have a good community to live in?
8. Do you ever hear people talking over ways of making the neighborhood better? What do they say?
9. Write a short paper on "My Ideas of a Good Neighborhood."
10. Write a paper on "What a Boy Can Do to Help His Community."
11. Prepare short talks on what the following people can do to help their communities:

(*a*) A school girl.
(*b*) A mother.
(*c*) A preacher.
(*d*) A blacksmith.
(*e*) A merchant.
(*f*) A truck-gardener.
(*g*) A fruit-grower.
(*h*) A dairyman.
(*i*) A farmer.
(*j*) A teacher.

CHAPTER II

The Community's Attitude Toward Its Own Interest

The Community and the Individual.—We learned in the preceding chapter that a man rarely has personal interests that do not in some way affect most of the people living around him. He may be a banker, a merchant, a miller, a truck-gardener, a nurseryman, or one of the farmers; but whatever he is, his work does not concern him alone. There are others whose interest and welfare are bound up with his. If he supplies good milk to his customers, the babies that drink the milk will be in no danger of illness because of it. If, however, he is careless with the milk, or if he obtains any portion of it from diseased cows, he is likely to do a very great harm to those who use it. Again, if he is a merchant who always gives good weight, his customers will be well pleased. But if he sells thirteen ounces of sugar to the pound, the people who buy from him will be cheated and will have just cause for complaint. The business that a man engages in is, therefore, of vital concern to almost every man, woman, and child living in the community, and is, to some extent, the business of the whole community.

Moreover, projects that are launched for the interest of all the people must be looked after by the com-

munity as a unit; else, they will not so well serve the community's needs. If an organization such as a good roads league, a grange, a home-and-school league, a coöperative buying or selling company is planned, everybody should be interested in its progress. If the community wants to do some wholesome advertising, or desires to launch a campaign against poverty, crime, house-flies, or mosquitoes, it is the duty of everybody to help the work along.

Nevertheless, there are, in almost every community, persons who are disposed to criticize community projects or to find fault with those who are trying to do things. Such people are usually not energetic. They often live from hand to mouth and, having little to do themselves, exert what energy they possess in opposing what others are doing. They usually have small influence, however, and sooner or later must give way to the larger currents of public opinion that sweep over them. Which pays the larger return in happiness and satisfaction—to growl about one's neighborhood all the time, or to boost it?

But in spite of the people who oppose movements for good roads, clean premises, better methods of farming, etc., a community usually tries to get together to better those conditions that concern the welfare of all the people. Some of these aims are good health, the right kind of education, a high standard of morals, well-directed religious activity, wholesome recreation, and business organization.

The success of any community in working together for these interests determines its standing in the eyes

of the outside world. More than that, it marks the degree of refinement, civilization, and progress which the people have reached. What, then, are some of the things that show where the people of the community stand?

The Community and Health.—One of the first things that a farmer would like to know if he should move into a new community is that community's attitude toward *the health of the people.*

Is the new locality healthful? What are people doing to keep it so? He would want to know about the water supply—whether the wells are deep or shallow, whether the springs are protected, whether the drainage is good or bad. He would want to know whether there are ponds to breed mosquitoes, and so scatter malaria. He would also like to know whether the people have good outdoor toilets that prevent the spread of typhoid, enteritis, dysentery, and other dangerous diseases. In short, he would be interested to learn whether the community has a health program, and whether it is well carried out.

Every wide-awake, prosperous community will have plans for keeping the people well, and the people will always be interested in them. If some of the wells are so shallow that water rises to the top when it rains, they will be either filled up or dug deeper. Such wells are always a source of danger, not only to the families who use the water, but to all who live near them.

If the toilets are in such condition as to allow house-flies to breed, and so scatter diseases that kill little

children and harm older people, everybody in the neighborhood will be interested in having them screened and cleaned up, or entirely rebuilt from designs that will render them safe and inoffensive.

If some careless farmer drags a dead cow or horse out into the field to decay, the community will insist that the carcass be burned or buried. If another man rolls any dead hogs into the river, or throws dead chickens into the brier patch by the roadside, all the people will protest against it. Decayed things pollute the air, poison the water, and breed flies that are likely to scatter deadly diseases.

CARELESS SEWAGE DISPOSAL
How will the people farther down the stream be affected?

If an epidemic like whooping cough, measles, or scarlet fever breaks out among the children, every sick child will be kept away from all other children, and the community as a whole will work to stamp out the disease. In the most progressive and enlightened neighborhoods, such matters as these are always looked after.

QUESTIONS

What is the attitude of the people in your neighborhood toward such things? How could the health and sanitation of the community be improved?

The Community and the School.—The second thing that the newcomer in a community would inquire about is *the education of the children.*

What kind of school is there? Is it well supported? Is there a teacher who can really teach? Is there a house in which a good school can be taught?

The question of education is one that concerns every individual in the community. The school belongs to all and should be supported by all. It should touch every life and make it richer. It should give to each child the training that will make of him a prosperous and useful citizen. If the people are divided over matters of education, if some support it while others are indifferent, the youth of the whole neighborhood—the citizens who are to make the community of tomorrow—will suffer.

Any community whose ideals are well developed stands as a unit for practical education adapted to the particular needs of that particular community. A child untrained is often a noble and useful citizen spoiled. He will not know how to vote intelligently. He will not be ready to coöperate with his fellowmen in large plans for community improvement.

QUESTIONS

Do you know of any people who do not support their school? Is their school the kind of school that the people ought to support? If it is not, whose fault is it?

The Community and Moral Standards.—A third matter of interest would be *the standard of morals among the people.*

Is the general moral tone of the people good? Is there any public or private enterprise that endangers the morals of the people?

Now the question of morality is an exceedingly important one. People are happy or miserable, a community is prosperous or "run down," just in proportion as the morals of the people in both public and private life are good or bad. If there is much drunkenness among the men, or constant cigarette smoking among the boys, it is safe to say that the moral tone of the community is bad. If there is a moving-picture show that keeps before the eyes and minds of youth things that suggest evil conduct or a sinful life, the good character of that community will be in danger. If there is vote-buying and selling at election time, or graft and bribery among public officials, it is evident that something is wrong with the public conscience, and that the morals of the place are low and unwholesome. It is not good for children to grow up in such an atmosphere.

The community should act as a whole on matters that affect the morals of the people. Even the worst man or woman has friends and sympathizers. But the community cannot afford to allow any individual or any enterprise to turn the minds of the youth into evil ways. Character is too valuable to be tainted; and life is too precious to be ruined. The people of a community should protect the morals of the young as they protect life itself. Whatever is likely to harm the characters of children or of young men and women should be removed.

QUESTIONS

What are some of the things that encourage people to live honest, upright lives? What are some of the things that hurt the morals of people?

The Community and the Church.—The man who plans to move to a new neighborhood would, in the fourth place, want to know about *the religious life of the people living there.*

Is it a religious, or a godless community? Do the people have a good Sunday-school and a good church? Does the church actually serve the people? Is the pastor or priest a man who knows what the people need? Is he doing the things that help them?

As a subject for universal community interest nothing is more important than religion. A good church is a matter of highest concern to the people who are most careful about their own welfare and the welfare of their children. They plan, also, for the church to do a work that will reach every individual and will bring everybody directly under its influence. Moreover, they endeavor that the roads leading to the church shall be so good that the people living in the farthest corner of the neighborhood may find it easy to reach.

A working plan that will enable the church to reach everybody in the community can usually be carried out to best advantage by one church organization. If there are two or more churches involved, there is danger of jealousy and rivalry among the people. When such feelings prevail, a program of helpfulness often degenerates into a contest for membership and a struggle for existence.

A large increase in the number of churches is not needed. Recent studies made in various parts of the United States by one of the great denominations show an enormous waste of effort and money in communities where there are too many churches. It was found that many of the churches were working almost exclusively for their own interests, and that a very large percentage were struggling hard for existence.

If, therefore, the people in the various churches would work together, each man respecting the religious views of his neighbor, they would accomplish much more good. There is no valid reason why men and women who live in the same neighborhood, who buy supplies from the same store, get their mail at the same postoffice, send their children to the same school, worship the same God, and expect to get to the same heaven should not work together in the same religious program for building up the community. They can do this notwithstanding the fact that they belong to different denominations.

QUESTIONS

How many churches are there in your community? In what special ways are they helping the people? Do they encourage wholesome social life? Are the leaders in social affairs also active workers in the church? How could the religious work be improved?

The Community and Play.—Still another phase of the community life that would interest the new man is *the play and recreation of the people.*

What do the people do to have a good time? Is

there a playground for the young people? Do the older people take any special interest in the recreation of the children? Is the moral atmosphere about the places of recreation good?

Both young and old need to play. Children need play more than older people; but a proper amount of

AFTER A HIKE

Nothing can be more stimulating than to take a walk of several miles in congenial company.

recreation among grown persons will prolong youth and add health and vigor to increasing years.

Play is just as necessary to a child as food and sleep. He can hardly grow to be a healthy man without plenty of it. He should have access to a playground where he can meet other children in friendly games and thus develop the power of quick decision, a sense of fair play, and the spirit of team work.

It is of very great importance that every home in the country provide a special place for the small children

to play, and that every community provide a suitable playground where all the children may come together frequently for fun and recreation. If the older people should gather at this place occasionally to watch a baseball game or to take part in a field-day contest, it would mean a better understanding among neighbors, would insure a finer community spirit, and would produce a more wholesome atmosphere in which to live.

QUESTIONS

What do the people of your community do to have a good time? Is there a good playground for all the children? Do they need one? Is the play ever supervised, or do the children do as they please?

The Community and the Law.—Another important question that the newcomer would ask is, *"What is the attitude of the people toward the law of the land?"*

Is it a law-abiding community? Or do men frequently get drunk, cheat their neighbors, sell whiskey illegally, or commit other crimes? What are some of the things that encourage the people to respect and obey the law?

There are numerous places that are commonly referred to by the people who live in them, as well as by the people who visit them, as "tough" neighborhoods. In these places there are always men who pay little attention to the law and who think little of violating it. Whatever business brings the people together also brings out the rough element, which rarely shows itself except on public occasions.

Such conditions are possible only where public opinion allows them to exist. If people as a whole do not condemn the boorish pranks of a boy and the lawless outrages of the bully, there will be plenty of boorish pranks and lawless outrages. Nothing so encourages a young bully as for people to overlook his misdeeds and give silent consent to his wrong-doing because he happens to be a good-hearted fellow or the son of some influential citizen.

Communities that permit such things to go unchecked deserve the reputation they have. The best people, both by speech and by daily example, condemn violations of the law. No man can afford to have his children grow up in an atmosphere where a few men feel that they have the right to disregard the law.

All men and women who desire a good place to live, and who want a wholesome atmosphere in which to rear their children will insist that plans be made for handling the lawless fellows among them. Social centers will be established for the purpose of making good citizens of them; or they will be imprisoned and taught by strong means not to disturb the law-abiding people around them. This reform can be easily accomplished, if the people as a whole condemn evil deeds and take a firm stand for justice and good behavior.

QUESTIONS

Is any part of your county or township considered a "tough" neighborhood? Why? How do the people of your community feel toward those who disturb public gatherings? In what ways does public sentiment favor good behavior? Does it at any time encourage evil-doing?

What could be done to make a bad neighborhood a law-abiding place?

Other Community Conditions.—Besides the conditions which have been mentioned, there are others which the newcomer would want to know, and which are scarcely less important to all the people in the community. The questions of poverty, business enterprises, coöperative plans for buying necessities and marketing produce, movements for building roads and making other improvements—all are of vital interest to everybody and should have everybody's support. There is often a difference of opinion as to how poverty should be dealt with, how coöperation should be managed, or how roads and other community improvements should be made. But these differences of opinion should never stand in the way of real progress. The man of patriotic spirit and community pride will never oppose a plan of work that will help the whole community, merely because he thinks it might be done in another way. Even the selfish man who has a reasonable amount of community spirit will not stand in the way of a good movement. He will sacrifice his personal interest, in order that the greatest good may be done to the largest number of people.

Upon the community's attitude toward its own interests depend the prosperity and happiness of the people. Enterprises that affect all the people for good should have everybody's support. If the thing is bad, the community will of course oppose it; if it is good, the people will encourage it in every possible way.

In communities where this coöperative spirit exists, the people can be neighborly, thrifty, progressive; they can have good schools, churches, and homes, and all that makes life most worth while; and they can still find time to do large things for other people. This is made possible because the strength and purpose of every man and woman are reinforced by those of every other man and woman in the neighborhood.

QUESTIONS FOR DISCUSSION

1. Tell how the work of the miller is related to all the people about him; the banker; the merchant; the farmer.

2. What are some of the conditions that concern everybody in a neighborhood? Which of these are very important?

3. What effect do people who boost their community have on their neighbors? What effect do they have on business?

4. What do you think about persons who criticize their neighborhood? How do these people affect business?

5. Tell why all the people should favor a good school; a good church; good roads; a good Sunday-school; clean premises.

6. How does a man who sells liquor to the men and boys of a community harm the community?

7. How does his business affect the school? the church? the home? the election?

8. Tell what you would like to know about a new neighborhood if you were planning to move into it.

9. Suppose the people are divided over a school question; what will the results be?

10. Write a paper of about 100 words, telling why all the people should work for a good school.

11. Write another paper telling why liquor should not be sold in the neighborhood.

12. Write a letter to a voter giving him several reasons why he ought to vote for good roads.

13. Discuss the following topics:

(*a*) How bad roads harm a community.

(*b*) The harm a poor school will do.

(*c*) The difference it makes to have a good merchant rather than a bad one.
(*d*) What to do with the vote-buyer.
(*e*) What to do with the vote-seller.
(*f*) The value of a health campaign.
(*g*) The value of a good Sunday-school.

CHAPTER III

Health and Sanitation

Necessity for Good Health.—"To be healthy is to be happy" is a saying that might profitably be spread among all the people of the countryside. Health, happiness, and prosperity—the three things that people on the farm strive for—are largely dependent upon each other; that is, a man can hardly have one in large measure without possessing the other two.

Good health is absolutely necessary to a successful life on the farm. The farmer has to raise crops in the summer, gather them in the fall, feed stock all winter, market the stock in spring, and prepare the soil for the new planting. For this continuous work he needs his health three hundred and sixty-five days in the year. If he is sick for only a few days at any time, his work suffers. The horses will go uncurried; the ground will remain unbroken; the sheep must do without salt; and, if it is crop time, the weeds will get ahead of him in the corn. No one but the farmer himself can look to the best interests of the farm. In many instances, good help is very hard to secure; and when it is secured, the "hired man," from the very nature of the case, does not take the interest and care in dealing with farm matters that the owner himself takes.

It is no less necessary that the farmer's wife should

have good health. Her duties in and about the house are just as important as those of her husband at the barn and in the fields. Meals must be prepared; the house must be kept in order; the chickens must have attention; the garden and flowers must be looked after; and the children must be cared for. The mother can look after the house and the immediate home interests better than anyone else; if she becomes sick everything begins to go wrong at once. The milk is uncared for; the flowers are neglected; meals are not properly prepared; and the children do not receive the right kind of attention. Many children remember what trying times there were in the home "when mother was ill."

The good health of the children is equally important. All the strength and practically every minute of the working hours are needed by the father and mother to care for the home and the many outside activities of the farm. If the children are in good health, the parents can devote all of their time and strength to maintaining those conditions that add happiness and prosperity to the home. But if a child is puny, or is seriously ill, it must receive almost constant care. Its illness causes loss of sleep to the parents and involves anxiety that weakens them. Especially is the mother unfitted for her many other important duties. No mother can work with the same freedom and sleep with the same refreshing quietness when a child is ill, as she can when all the children run and play in abounding health. Poor health is exceedingly expensive.

Expense Entailed by Ill Health.—Besides the suffering of the stock, the lack of attention to crops, the

anxiety, and loss of time, sleep, and energy on the part of the parents when sickness is in the home, there is the expense of doctors' bills and of medicine. In individual families where sickness occurs frequently, this expenditure amounts to a very considerable sum; while the total expenditure for a single year in the United States is astounding. Professor Irving Fisher, one of the greatest authorities in America on health statistics, estimates that there are always about three millions of people on the sick list of the country. The cost of medicine, medical attention, special foods, etc. for these people approximates $500,000,000 a year. That is about five dollars for each person in the country.

Another important item of expense is the amount of money that people who are ill do not earn during their illness. In the entire nation this unearned money amounts to another $500,000,000. This sum, together with the $500,000,000 of actual expenditure mentioned, is a distinct loss. If the people who become ill could remain well and work as usual, they would at the end of the year have saved in the grand total a billion dollars.

Much Sickness and Expense Preventable.—At least half of this great loss is caused by sickness that could be prevented. Prevention would be a comparatively easy matter, if the people throughout the nation were to engage in a systematic campaign against preventable diseases. Would it not be a wise plan for the citizens of the United States to spend a hundred million dollars to prevent illness that causes a loss of five times that amount in a single year?

The great sum just mentioned does not include the loss occasioned each year by the deaths of people who have been producers of wealth. Another half billion dollars must be added to cover this loss. Looked at in this way, it may easily be seen that preventable sickness is exceedingly expensive to the nation.

Nor does the entire amount of one and a half billion dollars take any account of the sorrow, the suffering, and the disappointment endured by people whose loved ones are taken away by unnecessary deaths. These things cannot be reckoned in terms of dollars and cents; they nevertheless constitute a very great burden.

Naturally, a man or a child is not so much interested in the cost of sickness throughout the country as he is in its cost to his own home and community. He must remember, however, that the entire nation is made up of communities that are very much alike. This similarity is especially true of rural districts. If, therefore, everyone would labor to prevent sickness in his own community, the whole nation would be spared great suffering and expense.

QUESTIONS

A case of typhoid fever that results in death costs a family about $175.00. What would be the cost if five people of one neighborhood should die of it? Would the money loss be considered the greatest loss to their families? There is really no need for any of this loss, because typhoid fever is a preventable disease.

Farm Life Favors Good Health.—It can now readily be seen that farm life demands good health

and cannot be made attractive without it. It must also be remembered that life on the farm tends to produce the good health that it demands. People who live in a well-kept home in the open country have every opportunity to be strong and healthy. The air is pure, the water is usually wholesome, the sunshine is abundant. There are sweet milk from healthy cows, vegetables fresh from the garden, and fruits in great abundance. There are meadows for the children to run and play in, creeks in which to wade and swim, cows to hunt for, and vegetable and flower gardens to work. Besides these activities, there are many other healthful occupations. Indeed, the things that people like to do and have to do in order to live well on the farm are the very things that tend to make them strong and contented.

WHY DO BABIES DIE?
If we could see where some of the milk comes from perhaps we could understand.

A Health Program for the Farm Home.—No one would think of buying a sick cow, or of exchanging a

good calf for a sick sheep or hog. People do not like to have sick animals about the house or barn, because they are likely to infect others and thus cause great loss.

In planning the day's work, the farmer always provides for special attention to the stock, in order that it may be kept well and strong. An average day for the farm boy includes several duties. At a certain time he feeds the horses, the cows, and the hogs. At another hour he waters them. Then he curries the horses, rubs down the colt, cleans out the stables, and carts away the manure. All this is done to keep the animals well and to help their growth. At other definite hours, the cows must be milked, chickens must be fed, and, at more or less regular intervals, the sheep must be salted and driven to another pasture. If the farm animals did not receive such regular attention, they would suffer. Indeed, some of them would become sick and die.

Now, what is true of the stock is, in a sense, true of boys and girls and men and women on the farm. Unless they give proper and constant attention to food, sleep, recreation, and other matters of health, they will become sick, and some will die. So, in making out a program for the day's work, it is very essential that each person devote a considerable amount of time to the care of his own health, and to that of the other members of his family. Many a farmer looks carefully after the health of his favorite horse or his Jersey cows, but neglects his own health and that of his children. If a cow gets sick, or a fine hog dies, it is

merely a loss of dollars. But if his wife becomes ill, or a child dies, sorrow comes into his life, and burdens of care fall upon him that cannot be estimated in dollars and cents. For what shall it profit a man if he gain the whole world of wealth, and lose his own life, or the life of his wife or child, in the gaining thereof?

Of course such a man does not intend to neglect his own health nor that of his family; in reality, however, he frequently does so. Diseases come in unguarded moments. Measles, diphtheria, pneumonia are not respecters of persons; and a child is just as sick if it contracts one of these diseases through careless neglect, as it would be if the neglect were willful.

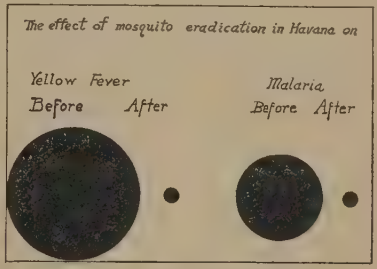
QUESTIONS

What particular precautions should a farmer include in his health program? Is it more important that he look after the health of his family and himself than that he provide extravagantly for his fine sheep or his thoroughbred colt? Why should he give greater attention to the health of his family?

Good Health a Community Matter.—It must also be remembered that everybody in the community has a certain amount of responsibility for everybody else. If sickness could be confined to one child, or to one family, the danger for the whole neighborhood would be slight. But illness is not often so confined. Some diseases spread rapidly and, in a very short time, affect a great many people. Each man, therefore, owes it not to himself alone, but to the entire com-

munity, to keep himself free from disease and in good working condition.

In the chapter on *A Man and His Community* we learned that every individual in the community is more or less intimately related to every other man, woman, and child who lives there. Whatever affects one is felt to some extent by all. In few circumstances is this so true as in sickness; for if one family has smallpox, diphtheria, or any other highly contagious disease, the health of the entire neighborhood is in danger.



A GREAT VICTORY

Major Reed's discoveries of the responsibility of the mosquito for yellow fever, and the resulting war on the pest, have reduced the deaths from yellow fever to 1/80 of the former rate, and the malarial death rate to 1/40 of the old rate.

One man may have duties that concern everybody living in his vicinity. The miller furnishes the meal and flour to make the bread that all must have. The blacksmith shoes everybody's horses and mends everybody's tools. If either of these men becomes sick, all the community will suffer great inconvenience. Is it not of great importance that these two men, as well as all others whose work concerns so many people, should be in good health all the time?

In order to insure good health to all the people, it is necessary that all work as a unit in every kind of health movement that affects the entire community. We

have already learned the importance of coöperation in community affairs, but we emphasize it again here. *All should work together in movements where all are affected and helped.*

The Responsibility of the Individual.—In addition to coöperating in the community health movement to dispose of weeds, filth, and other objectionable refuse, it is the duty of the individual to protect his own health in every possible way. One sick sheep will endanger the entire flock. One man or child suffering with grippe or tuberculosis or some other contagious disease may be the cause of spreading that disease to many others. It is said that one person afflicted with tuberculosis will usually give it to five others. Of course, some of those affected will get well; but the disease is almost certain to kill one of the five.

The best way for a man to safeguard his family and his neighbors is to keep himself well. The best way to keep well is to observe the simple rules of health. There are numerous devices advertised by so-called expert physicians for keeping people in good health. There are "electric" belts, "electric" hairbrushes, particular kinds of food, certain specific treatments, and a thousand other worthless things advertised, not for the good they will bring to suffering people, but for the money they will bring to the people who advertise them. There are sunshine baths and electric baths; the habit of drinking water during meals and the habit of drinking nothing during meals; the habit of eating vegetables only and the habit of living chiefly on meat. Each of these suggestions about diets and sun baths and

massages is no doubt good for some people; but the man on the farm who is in fairly good health and who has crops and farm animals to care for has very little time to resort to health devices. He has all about him the means of preserving his health; and he needs only to use what he has, rather than to purchase the prescribed cures that are so widely advertised.

It is, however, not always possible to prevent sickness. Diseases frequently come in spite of all efforts to avoid them. But it is possible to prevent at least half of the sickness that causes so much suffering. Here are a few simple rules that everybody can follow.

Some Simple Rules of Health.—*1. Let patent medicines alone.*

Never take medicines that are widely advertised in newspapers, magazines, almanacs, and on barns, board fences, and billboards, unless they are recommended by competent physicians. A further discussion of this subject will be found in the chapter on ***Patent Medicines***.

II. Always have plenty of fresh air in the room.

Avoid rooms that are overheated. The habit which many people have in the winter season of sitting in hot, close rooms from which they go out into the cold is one of the most fruitful sources of grippe. And grippe often results in pneumonia, or leads to a serious disease of the nose, ear, throat, or other parts of the body.

Sleep with plenty of fresh air in the room. Throw open windows and doors; let the fire die down; and, on cold nights, put more cover on the beds.

One of the most frequent causes of sickness in country homes is the habit of sleeping in closed rooms. There is too much fear of the night air. Doors and windows are too often tightly shut. On cold nights, fires, which are frequently kept burning, consume whatever pure air the rooms contain. Out of these conditions come grippe, bronchitis, pneumonia, and other throat and lung disorders that develop into serious illness and frequently cause death. Whatever shuts out sunshine and fresh air shuts out health. An abundance of fresh air in the sleeping room is one of the surest safeguards against disease.

THE COMMON DRINKING CUP
If you knew who took a drink from the chained cup just before you did, you might understand the danger.

Tuberculosis is another dreadful malady that is encouraged by sleeping in closed rooms. In the country it is the cause of more deaths among young people and those in middle life than any other ailment. Not fewer than 150,000 fatal cases are reported annually; and over 800,000 other people are affected with it. It is found everywhere in both city and country and attacks people in all ranks of life. It is contracted by breathing into the lungs the germs of the disease scattered by those who, afflicted with the complaint,

are careless of how they cough and spit. The patient who "catches" it is almost certain to die if he persists in sleeping in a badly ventilated room.

Although there are many cures advertised for consumption, there is no drug known to physicians that will cure it. The only remedies known at present are good food, sunshine, rest, sleep, and fresh air. One

THE BETTER PLAN
Each of the girls has her own glass. There will be no danger of contagion.

who suffers from it should not spend his life indoors. He should live and sleep in the fresh air. If he does this, he may recover; if he does not, his chance of recovery is slight.

In summer and winter alike, plenty of fresh air should be admitted to the sleeping room. Many houses in these days have sleeping porches where the entire family spend the night even in the coldest weather. Persons who are afraid to sleep out of doors at night

need only try it a few times to be convinced of its beneficial effects. They will soon find that they feel an increase of vigor when they get up in the morning.

III. Eat only well-prepared food.

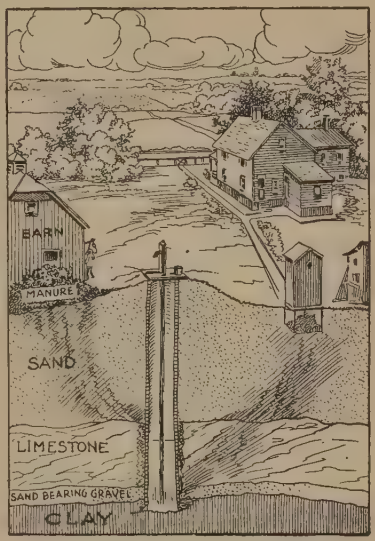
One of the most common causes of illness and partial disability is the use of poorly cooked food. Bad bread, heavy cakes and pies, and too much fried meat cause a large percentage of the illness of country people. Indigestion, flux, and other intestinal troubles are invited by the use of improperly prepared food. Anyone who writes to his State Board of Health, or inquires of his family doctor concerning this matter will learn that intestinal diseases are very common among the poorer country people. But they are by no means confined to the poorer classes.

A good cook book that may be bought for a few cents will prove of great value in bringing better health to the family and fewer visits from the doctor.

IV. See that the drinking water is pure.

This means that all filth must be kept away from the house and barn. Impure water and filth are the sources of much of the sickness in the country. The germs of typhoid fever get into the well, and sometimes into the spring, and infect all people who drink the water. The way to prevent this infection is to keep the well or spring thoroughly protected. The spring should be fenced in to keep out pigs and dogs, and it should be so protected that water may not flow into it directly from the surface. The well should,

first of all, be located where it will not receive the seepage from the toilet or barnyard. It should be deep, and should have a curb that will keep out the surface water. It should be thoroughly cleaned at least once a year.



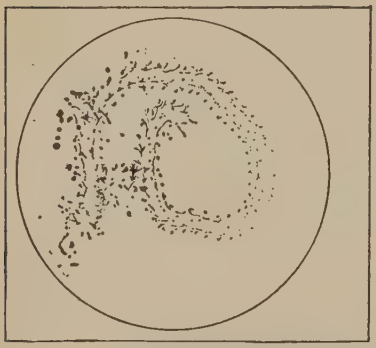
AN UNSANITARY WELL
The drainage from the toilet and from the manure pile renders the water unfit for use.

V. Do not allow filth to collect on the premises.

Filth about the house is another constant source of sickness. While not especially bad in itself, except for its offensive odor and appearance, the chief danger from filth lies in the fact that it is the breeding place of the millions of house-flies that infest so many country homes. If bits of meat or greasy water are thrown near the door or windows in warm weather and allowed to remain there, the place is visited at once by flies, which deposit eggs in the refuse. These eggs hatch in a few hours, and live in the refuse for ten days or two weeks as worms or maggots. Then they become flies, and go about depositing other eggs and scattering disease germs.

The favorite breeding places for the fly are the stable manure and the outdoor toilet. The eggs are deposited in these places by the tens of thousands; and in a very short time swarms of flies, hatched from the eggs, are seen hovering over the spot and feeding upon the refuse.

The house-fly is dangerous because it scatters the germs of disease. The germs most frequently scattered are those of typhoid fever and the various kinds of diarrhea. When, in case of these diseases, the waste from the sick room is not sterilized or burned, but is thrown among the weeds, flies visit the spot immediately as a good feeding place. In doing so they get the impure matter on their feet and carry it into the unscreened home. This matter contains the germ of the disease. It may be typhoid, flux, enteritis, or some other intestinal trouble. The flies go direct to the butter, syrup, milk, or other food, get on it or in it, and leave the impurities containing the germs. Whoever eats the food is likely to contract the disease.



Courtesy of Doubleday, Page & Co.

DANGERS FROM THE FLY

These black spots show the bacteria colonies that developed from the footprints of a common house-fly.

Every year over 25,000 people die in the United

States of typhoid fever; and more than ten times that number suffer from it and recover. A very large percentage of these cases are the result of the activities of the common house-fly. Thousands of children die every year of enteritis, and many thousands more are afflicted. The house-fly is directly responsible for the death of these little ones, who are poisoned by the deadly germs that are left by flies on the fruit or other food that the children eat.

DANGEROUS ENEMIES
Flies look harmless, but they transmit the most deadly diseases. They should be killed off.

What is the remedy? Destroy the source of the disease, and the disease itself will be stamped out. Keep the drinking water pure by protecting the well or spring. Screen the doors and windows so that flies cannot get into the house. Keep the refuse cleaned away from the toilet, the stable, the barn lot, so that the flies cannot breed there. If necessary, put screens about the toilet to keep all flies out; or, what is much better, build a sanitary toilet and exclude the flies. Pile up stable manure in places made fly-proof. If these precautions are taken, there will be little cause to fear the

dangerous diseases that destroy so many children during the summer months.

Another safeguard against typhoid is the anti-typhoid serum, which may be injected by the family physician. This is a harmless and almost painless treatment that renders people immune from typhoid for from three to five years.

VI. Take frequent baths.

It is necessary to bathe frequently in order to keep the skin clean. The skin, as you have learned in physiology, is filled with tiny pores or openings through which large quantities of waste matter pass from the body. This waste matter is poisonous, and would become harmful if it remained in the body. When the body is in good health, therefore, it escapes constantly; and the escape is more rapid when people perspire. Accumulating on the surface of the skin, however, it stops up the pores, and thus prevents the escape of other waste. Besides, if allowed to remain, it causes the body to have an offensive odor.

Now, the best way to avoid this offensive odor and to keep the pores of the skin open is to bathe every day, or at least several times a week. In the arrangement of every country home, provision should be made for a bath room and for water to bathe in. If this provision is made, much sickness will be prevented and the joys of living will be greatly increased.

VII. Wear clothes that are comfortable.

Clothes should always be adapted to the weather and to the kind of work that the wearer has to do.

Many a girl who has gone out on a cold day without sufficient clothing has paid for her carelessness with her life. Summer dresses worn in winter are often the cause of deep colds that frequently lead to pneumonia, and sometimes result in death. Many a boy has worn his overcoat or sweater in an overheated room, where he became too warm, and has then gone into the open, where he has contracted a bad cold that has led to pneumonia and the grave. Foolish fads of fashion, such as tight lacing or extremely high heels, often result in serious injury to health. But the bad health is usually not noticeable until years afterwards. The boy and girl who do not dress with care are almost certain to pay the penalty of their imprudence, although they may reach middle life before they do it.

VIII. Have a medical examination at least once a year.

Many diseases, such as tuberculosis, Bright's disease, cancer, heart disease, are hard to detect in their early stages and can be recognized only by a skilled physician. If treatment is begun promptly, the patient may be cured; but if it is delayed, the malady in the majority of cases proves fatal. Even tuberculosis, which destroys more lives than any other one disease, can be cured, if treatment is begun in time.

What man would fail to examine his wagon or his automobile carefully before starting on a long journey, to assure himself that every rod and bolt is in good condition? Is it not just as important to have one's body examined at the beginning of each twelvemonth's journey of life? It is much more expensive to be sick,

than it is to be examined frequently in order to prevent sickness.

IX. Endeavor at all times to prevent prolonged illness.

Of course, it is best to prevent illness altogether; but it is not always possible to do so. No one, however, should suffer with a disease that affects nose, eyes, ears, teeth, throat, or any other part of the body without seeking at once the means of curing it and of preventing its return.

Other simple means of preventing illness need not be reduced to rules. Take plenty of outdoor exercise, play as often as opportunity comes, rest when necessary, and seek every means of keeping both body and mind in a pure and healthy condition.

There will be times when people of the community will suffer with diseases over which the medical men of the present day have no control. Some will get sick and will die in spite of all care. But careful study has made it evident that at least half of the early deaths can be prevented, and that with the proper care of health, men and women should live until they have done their share of the world's work, and are ready to make way for the younger generation who are waiting to take their places.

QUESTIONS FOR DISCUSSION

1. Do many people get sick in your neighborhood during the year?
2. What are the diseases that affect these people most frequently?
3. At what time of the year does most sickness occur? Why?
4. Is the greater part of the sickness among older people or children?
5. At what season do children suffer most? Can you tell why?
6. Do epidemics such as measles and whooping cough ever come?

7. Tell how these could be kept from spreading.
8. Do they interfere with the school? Tell about one such case.
9. What do you think the people could do to keep out epidemics?
10. Name the things that each individual can do to protect his health.
11. Mention some of the common habits that interfere with health.
12. Name some things that the community can do to improve health.
13. Are there any swamps or stagnant ponds near your home? Can you tell how such places cause sickness?
14. Tell several ways in which good health helps all the people.
15. Tell some ways in which sickness, either in one family or in several families, hinders the progress of the community.
16. Plan for a community meeting in the interest of good health.
17. What would you do with the person who takes no interest in such meetings?
18. Write a paper on "Why We Need a Public Health Meeting." Send a copy of this to your county paper for publication.
19. Write a letter to a friend telling him how to avoid typhoid fever.
20. Why do people not have more fresh air in the sleeping room?
21. Write to a friend telling him how to get well of consumption. Tell him how to avoid taking it.
22. Make out plans for a clean-up day in the community.
23. Prepare a paper for the first clean-up day meeting, telling why all should join in the movement.
24. What can be done with the person who doesn't believe in such things?
25. What part ought boys to take on clean-up day?
26. What are some things that a girl can do?
27. In what ways may boys and girls help to keep the yard clean?

Should you desire to make further studies in health and sanitation, numerous bulletins may be secured from these sources:

The State Board of Health.
The State Experiment Station.
The State Tuberculosis Commission.
The Department of Agriculture, Washington. D. C.
Public Health Service, Treasury Department, Washington, D. C.
The Metropolitan Life Insurance Company, 1 Madison Avenue, New York City.
The Prudential Press, Newark, N. J.
The Russell Sage Foundation, New York City.
The American Medical Association, Chicago, Ill.

CHAPTER IV

The Relation of Health to Education and Crime

Health and Education.—A very important consideration in the matter of health is the effect that poor health has on the education of a boy or a girl. The difference between a bright child and a dull child in school is often merely the difference between a healthy child and one with some physical defect. For a long, long time this truth was not recognized by parents and teachers, and was not even suspected by the doctors. But we know definitely now that the child who has constant eye or ear trouble, who has bad teeth or adenoids, or frequent attacks of tonsilitis does not and cannot learn so rapidly as the child who does not suffer from these or other distressing ills. Every day this fact is proved again and again in city schools, where children cured of physical defects begin almost immediately to learn as rapidly as those who have always made the highest marks in their classes.

Dr. Leonard P. Ayres, of the Russell Sage Foundation, was one of the first men to call attention to this circumstance. In one of his books, *Laggards in Our Schools*, he shows, in a most convincing way, that dullness in class is, in most instances, the result of physical illness that can readily be cured. Reports from thou-

sands of schools in hundreds of cities and a few country communities prove the truth of this.

Everyone has known of boys and girls who could not learn. Try as they might, things came hard to them. They read badly, were stupid in arithmetic, or could never get a history lesson. They always received poor grades and suffered the humiliation that goes with low marks. If a competent physician had examined th se children, he would, in all probability, have discovered some trouble with teeth, eyes, ears, throat, or nose. What they needed was proper medical attention.

Medical Examination in the City Schools.—In a constantly increasing number of cities in the United States, provision is made for regular examination of all the children who attend the public schools. These examinations show an astonishing amount of sickness that interferes seriously with school work. In Massachusetts, from 1907 to 1910, inclusive, examinations were made each year of nearly half a million school children. During those four years it was found that of every 100 children examined, 18.32 per cent suffered from eye trouble, and 4.97 per cent suffered from diseases of the ear. Examinations in other states show about an equal percentage of illness. The defects found in these children very greatly hindered their progress as students.

The following table adapted from *Medical Inspection of Schools*, by Dr. Luther H. Gulick and Dr. Leonard P. Ayres, shows that even a slight ailment may hinder a child very materially from making the progress in school that he ought to make. It shows

the number of years required to complete the eight grades.

Children having						
No defects	complete	8	grades	in	8.0	years
Poor eyesight	"	"	"	"	8.0	"
Bad teeth	"	"	"	"	8.5	"
Defective breathing	"	"	"	"	8.6	"
Diseased tonsils	"	"	"	"	8.7	"
Adenoids	"	"	"	"	9.1	"
Enlarged glands	"	"	"	"	9.2	"

It is encouraging to note that examinations made in later years show a smaller number of children who are handicapped by illness. This improvement is due, in large measure, to the constant care and supervision which the children receive from school nurses and physicians.

QUESTION

Would it not be a wise plan for the people of all cities to have their children examined regularly by competent physicians, in order that these hindering defects might be discovered early and cured before they do serious damage?

Health and Education of the Country Child.—But what can be said of the children in the country schools? Do they suffer as the children in the city schools do, and from the same causes?

For a long time examinations showed that children in the open country were freer from disease than those in the cities. The pure air and water, the life out of doors, and the healthful occupation on the farm kept them in better physical condition than were their

neighbors in the towns and cities. But recent examinations seem to indicate that this is no longer true. It is not true, at least, in many parts of the country.

During the last few years, the people of our cities, appalled by the great amount of sickness and death among children, have taken steps to prevent it. The purest water has been secured; good sewage systems have been built; playgrounds with an abundance of apparatus have been provided; medical inspection that detects disease or defect early has been established in most of the schools; the milk supply is watched; in fact, almost everything possible is done to save the lives of the children.

Such care, unfortunately, is not exercised in the open country. There, the people depend chiefly on their natural strength and healthful surroundings to keep them well. The surroundings, however, are not always so healthful as they might be. The water too frequently comes from wells and springs that are wholly unprotected. The doctor is rarely called until sickness has appeared. Epidemics of whooping cough, measles, and other disorders often rage unchecked among the children of many sections, causing great suffering and a high death rate among both young and old.

There is, in many places, an alarming amount of illness that hinders the progress of the country child in his school work. In spite of this fact, only a few diseases, like trachoma and hookworm, have been attacked with a view to stamping them out. It is, indeed, high time that the people in the country

should devote more money and attention to the prevention of diseases that hinder progress in the country schools.

QUESTIONS

Would a wise farmer allow a colt with a curable defect to become a horse, maimed for life and poorly adapted for work on the farm? If the colt can be cured, the farmer will promptly have him cured. If such attention is given to colts, what should be done to prevent children from suffering from ailments that can easily be cured? Is not a child worth more to the world than many colts?

Poor Health and Crime.—Another circumstance connected with this matter of health must not be overlooked. Ill health is one of the chief causes of crime.

When this fact becomes generally known, people will no doubt have a very different attitude toward criminals, especially young criminals. Heretofore, it has been the custom to punish severely those who commit crime. Thousands of men have been hanged who would never have committed the awful crime of murder had they not been physically or mentally defective.

Everyone should consider carefully the question: Has society the right to take a man's life as a punishment for crime, before all the resources of medical knowledge have been exhausted to learn whether he is hopelessly bad, or is merely suffering from a crime-producing disease?

QUESTION

Which is the wiser plan—to hang him, in order to rid the community of him, or to cure him, and make of him a good respectable citizen?

Poor Health and Youthful Crime.—The treatment of boys and girls who commit petty crimes has long been severe, and entirely out of keeping with the loftiest ideals of citizen-training. In the absence of juvenile courts, children scarcely in their teens are arrested, and tried before the regular courts as though they were criminals. Bad boys and girls are sent to the reform schools, where the moral influence is often unwholesome.

But recently, as a result of much careful study, we have learned that truancy and many of the petty crimes committed by boys and girls can be traced to ill health of some kind. It may be a disease contracted since birth; or it may be a physical defect that the child has always possessed. Bad eyes, poor hearing, a curved spine and its attendant evils, or a diseased nervous system often make of a youth a truant or a rebel against good order and good society. He does wrong not from natural choice, but because his will and his desires are turned in the wrong direction by diseased conditions over which he has very little control.

The Cost of Crime.—Crime is very costly to the community. A police force and criminal courts must be maintained in order to protect good people from criminals. Jails and other prisons and reformatories must be provided. These organizations are all expensive and consume a large percentage of the public funds. Moreover, as soon as a man becomes a criminal, he ceases to be a producer of wealth and becomes a source of expense to the people. Would it not be much better to prevent the boy and girl from becom-

ing criminals, rather than to wait until a crime has been committed and then send them to prison? This last course not only destroys their usefulness as citizens of the community, but brings shame and sorrow upon themselves and their families that nothing can ever entirely drive away.

The Need of a Public Health Officer.—At the present time, many people throughout the country insist that each community should employ a public health officer whose business it shall be to visit the people frequently and suggest measures that will keep them in good health. This officer will not put off his call until there is sickness in the home. He will visit families before they become sick and will tell them how to keep well. He will examine all school children, from time to time, to see if any of them need medical attention to cure a defect or to ward off preventable disease. If a child is not learning rapidly, this officer will find the reason and will take steps to help the child. If a boy or girl has a tendency to commit crimes of any kind, he will ascertain by careful examination whether this tendency is due to physical defect, and will immediately take steps to remedy the trouble. This public health officer will be employed by the people just as soon as they are convinced that they really need him. The children who are in school, where such things are being discussed, can help to create sentiment in favor of such an officer in the community.

QUESTIONS FOR DISCUSSION

1. What should be done with a boy who breaks into a store, or steals chickens?

2. What should be done with a girl who runs away from home and who behaves badly while she is at home?

3. Have you ever known any boys or girls who had very bad teeth? What did they do for them?

4. Tell some of the advantages of good teeth. Some of the dangers of bad ones.

5. How do you suppose bad teeth hinder a child from learning rapidly?

6. Why cannot a child with bad ears or throat learn so rapidly as one in perfect health?

7. Do you know of any child suffering with adenoids? Can you tell why adenoids hinder the child from learning fast?

8. Consult a doctor and find out what is best to do when one has adenoids.

9. Has anything ever been done in your community towards having bad boys and girls examined by a doctor? Why?

10. Discuss these questions:

(*a*) Is it right to put a small boy in jail for stealing?

(*b*) Every community should employ a doctor to examine children at least once a year.

(*c*) Some reasons why all school children should be examined regularly by a doctor.

(*d*) If schools and churches should do their duty, jails and other prisons would not be needed.

(*e*) The community as a whole is responsible for bad boys.

(*f*) What a public health officer could do to keep us well.

11. What can a doctor do to keep boys and girls out of the reform school?

12. How may the doctor help the sheriff in keeping peace?

13. Write a letter to a doctor telling him how he may help boys and girls to learn readily.

For further study of the relation of health to education and crime consult some of the following:

(*a*) *The Bitter Cry of the Children.* By John Spargo. The Macmillan Co., New York.

(*b*) *Misery and Its Causes.* By Edward T. Devine. The Macmillan Co.

See also the reports of the State Conference of Charities and Correction, of the National Conference of Charities and Correction, of the State Prison Commissioners, etc.

CHAPTER V

The Patent Medicine Evil

We must not close our discussion about health without speaking of the evils of worthless patent medicines. Such patent medicines are drugs made exclusively by certain companies or individuals and generally sold under a guarantee to cure particular ills. Some of them are valuable and are recognized and used by competent physicians; but the vast majority of the most popular kinds are entirely worthless, and many are decidedly harmful.

These useless nostrums are sold everywhere in the land; and the quantity of such drugs used by people in the country is astounding. According to the advertisements appearing in almanacs and newspapers and on barns, billboards, board fences, rocks, and other places, they will cure practically every ill known to the human race. Hair restoratives, complexion tablets, elixirs of life, liquid electricity, liquid oxygen, plasters that cure twenty different diseases are widely advertised. Cures for cancer, consumption, rheumatism, heart disease, dropsy, gout, epilepsy, paralysis, general debility, and every other kind of sickness abound. Since there are always people who suffer, the makers of patent nostrums always find a ready market for their wares. And it is painfully true that the diseases

that are hardest for the doctors to treat successfully are the ones most likely to be exploited by the quacks who sell nostrums.

There are two facts about widely advertised nostrums that everybody ought to know. The first is that the cures do not cure. Many of them contain nothing that has any medicinal value whatever. The second fact is that many of them are actually harmful, and depend entirely upon some kind of opiate, alcohol, or other subtle poison for their effect. Some produce drug habits and even death.

Many of these nostrums contain queer mixtures of drugs. One hair remedy contains lard, beeswax, castor oil, beef marrow, oils of orange, lemon, cloves, and two or three other substances. It is advertised to cure scalp diseases, make hair grow abundantly, and to take the kinks out of curly hair. A certain consumption "cure" sold by a man in an eastern city contains cinchona bark powdered, ipecac, rochelle salts, and morphin. A popular kind of pill contains green vitriol, sugar, and starch. An obesity remedy consists of soap, epsom salts, and washing soda. This mixture is to be dissolved in bath water, or rubbed on the bodies of fat people to make them thinner. An eye cream contains cocoa-butter and lanolin, or some similar fat. In spite of the fact that it contains no medicinal value whatever, the maker claims that all eye troubles can be cured by it. A small box of this sells for two dollars.

Numerous other so-called cures could be mentioned, whose medicinal properties are claimed to be as won-

derful as any of these, but whose ingredients are really worthless, if not actually harmful. The mixtures often contain such rare combinations of drugs that one is reminded of a certain physician of medieval times who made his patients "swallow glow-worms," and rubbed them "with beetles and crickets," or gave them "seven heads of fat bats" as a remedy for disease of the spleen. To find out what patent medicines really contain, it is necessary merely to consult Dr. Harvey W. Wiley's book, "1001 Tests," or to write to the American Medical Association, Chicago, Ill.

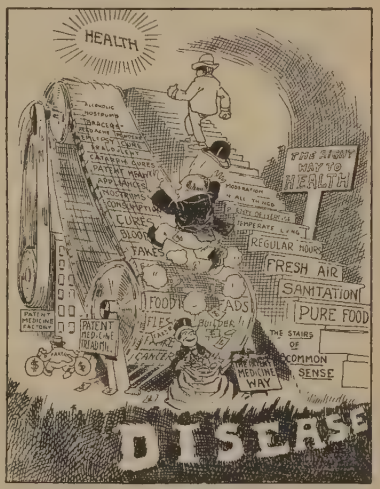
It will be convenient to consider these nostrums under a few special classes. They are so numerous, however, that only a very few can be discussed in this chapter.

Headache Remedies.—These are among the most widely advertised and most widely used of all the nostrums. A very large proportion of them depend for their effect upon acetanilid, a dangerous white powder which is made from coal tar. This powder interferes with heart action and produces a depressing effect. Many people cannot use any kind of medicine that contains it. Hundreds of people are known to have been poisoned by the drug, and not a few have been killed by it. A score or more of popular headache remedies contain this dangerous drug. In fact, almost all of them contain it. Not one of these "cures" should ever be touched except on the advice of a good doctor.

Fake Consumption* Cures.—Of all the diseases that

*Consumption is the popular name in some sections of the country for tuberculosis of the lungs.

afflict people in youth and middle life, tuberculosis kills by far the largest number. It is a lingering malady which attacks people in all stations of life. No one can be too rich and none too poor to have it. Up to the present time, no doctor has been able to discover any drug or combination of drugs that will cure it.



WHICH?

There are two ways of attaining health. Which of them do you think is the better?

There are, however, all sorts of fake consumption cures advertised on the market. Many of these contain some form of morphin, and a large percentage contain alcohol. Both are harmful, and hasten rather than retard the death of the unfortunate person who uses remedies containing them. None of the so-called consumption remedies will cure tuberculosis.

There are literally dozens of these pretended cures, all manufactured by men and women, who make false, sensational claims for their drugs, in order that they may catch the attention of the people who suffer from this terrible malady. Sometimes an old drug comes out under a new name; for the newer the "discovery," the more certainly will afflicted people buy it.

Nevertheless, it must at all times be remembered that there is not known to the medical world any drug that can be put into a bottle or a pill that will cure consumption or any other form of tuberculosis. Expert physicians in many parts of the world are working to find such a remedy; but they have not yet found it. Until a real cure is discovered, people must take the open-air and rest treatment which is recommended by all competent physicians.

Cancer Cures.—Another favorite remedy with the patent medicine makers is the so-called cancer cure. Cancer is a terrible malady which is the cause of a constantly increasing number of deaths. For many years all the various treatments of the greatest specialists in all the world have proved of no avail against its worst forms. Every now and then an announcement is made in the daily press of the discovery of a real cure; but thus far these cures have not proved successful. An interesting thing about these announcements is this: the physician who believes that he has discovered a remedy immediately tells the whole world exactly what his treatment is. Here, then, is just the difference between the honest doctor and the dishonest maker of patent medicines. The honest doctor always makes known his discovery so that all other doctors may use the treatment. The dishonest faker always keeps his "discovery" a secret, in order that he may sell his products and make money for himself. The worthy physician keeps nothing secret, because he wants to help humanity; the dishonest quack does not want to tell what his patent nostrums

contain, because he wants to reap the benefit from their sales.

There are very many of these fake cancer cures which are absolutely worthless. The United States Government has issued fraud orders against many of the makers of these worthless "cures," and has stopped some of the murderous business.

Soothing Syrups.—Soothing syrups comprise a very popular class of remedies which find a ready sale in the country. In most country stores, bottles and packages containing various kinds of cough syrups and soothing syrups are an important part of the stock. There are mixtures for babies and mixtures for adults, that profess to be unfailing remedies for colds, coughs, colic, and pains of every description.

Many of these drugs depend upon an opiate for their soothing properties. Mothers frequently give their babies paregoric and other drugs to quiet them or to put them to sleep, not knowing that they are giving the children opium. The drug affects both children and older people; but the effects soon pass away. Serious results, however, often follow continued use of these remedies. The opiates contained in many of them frequently create the opium habit, which is much more serious than the temporary ailment that the remedies are supposed to cure.

Catarrh remedies, also, belong in this class. They are put up in a variety of forms—powders to snuff up the nose, powders to smoke, liquids, and pills or tablets. Some of them give temporary relief, because they contain cocaine or other powerful drugs. None

of them should be used, except on the advice of a good doctor.

Remedies for Women.—One of the worst phases of the patent medicine business is the manufacture and sale of remedies to "cure" all sorts of troubles that afflict women and girls. Big headlines in advertisements tell of wonderful cures of disorders that baffle the skill of expert physicians. The most delicate topics are discussed in a painfully frank manner. Many of these ailments are more or less temporary in character; and the fact that they soon cease to exist is offered as evidence that a cure is effected by the use of drugs. Others of them may become serious enough to impair the health of the patient for a whole lifetime, unless they are properly treated by a doctor who is honest and who knows his business. The use of patent medicines frequently keeps sufferers away from the doctor until it is too late for him to give relief.

The literature sent out by the companies that make these remedies tells of marvelous cures, and gives testimonies from many happy women, who were once sufferers, but who now are well and strong. It is not generally known that such testimonials may be bought by the thousand from unprincipled people who make a business of furnishing them.

Drugs Producing the Alcohol Habit.—It is a common saying that the use of patent medicine, once begun, must be kept up. This is true in far too many instances. All mixtures that contain cocaine, opium, alcohol, or other drugs that stimulate or depress the

body tend to produce habits. More drugs are craved to satisfy the conditions that the drugs themselves create.

The table that follows will help you to understand why some of these medicines form habits. All of the remedies referred to were once very popular, and some of them are still on the market. The figures show the amount of alcohol which the mixtures contain.*

	Per Cent Alcohol
A popular tonic	28
A stomach bitters	44
A compound	21
A woman's remedy	20
A tonic	18
Another tonic	26
A blood bitters	25
A spring tonic	9

Since it is well known that alcohol, when used for a considerable time, becomes a habit, is it surprising that people who use much of any one of these remedies are likely to form the patent medicine habit?

Everyone knows that the use of whiskey, beer, wines, etc. will produce the alcohol habit. It is interesting to compare the amount of alcohol contained in some of the popular drinks sold in bar-rooms with the amount in some of the famous "cures" mentioned in the above table. The figures on the following page show the amount of alcohol the "drinks" contain.

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* For further information on this subject see the first three books mentioned at the close of this chapter.

	Per Cent Alcohol
Whiskey (bottled in bond)	50
Most whiskies contain much less.	
Beer	5
Claret wine	8
Champagne	9

We have mentioned only a few of the patent nostrums that are sold to sick people throughout the country. Many families remain poor because they expend their little incomes for patent medicine. They fail to realize the injury that they do to their bodies and minds by the use of such stuff.

Sickness Exploited by Makers of Nostrums.—Whenever a patent remedy is advertised on barns, or billboards, on big posters on country stores, or in newspapers, it is safe to infer that somebody is trying to make money by exploiting sickness. These makers of nostrums often claim to be physicians, and graduates from famous medical institutions. They are, in fact, more often men who have failed as doctors, or who have never had any medical education. Whenever an advertisement tells of the wonderful cures that some doctor is making, people may at once class him as a quack who is making money through false statements and fake remedies. Respectable physicians do not advertise in this way.

The safest course is to avoid every remedy that is widely advertised. In case of sickness, consult a doctor and follow his advice.

QUESTIONS FOR DISCUSSION

1. What are some of the patent medicines advertised in your neighborhood? How are they advertised?

2. Do you know of many people who use them?

3. Do you know of many people who have been cured by them?

4. Do you think they learn about them from advertisements, or from other neighbors who have used them?

5. What do you think of the idea of allowing no billboards to be put up along the roads?

6. Do you think a farmer ought to allow his barn or his fence to be used to advertise these nostrums? Why?

7. Do you think that people would use these medicines if they knew what they contain?

8. Suggest some ways by which people may learn the real character of these so-called cures.

9. Write a paper of about 200 words on "What I Can Tell My Friends about Patent Medicines."

10. Write a letter to a friend telling him about the harmfulness of some particular nostrum.

11. Here is a list of books and bulletins from which you and your friends may learn more about patent medicines:

Nostrums and Quackery. The American Medical Press, Chicago.

1001 Tests. By Dr. Harvey W. Wiley. Hearst's International Library Co., New York City.

The Great American Fraud. By Samuel Hopkins Adams. P. F. Collier & Son, New York City.

Consumption Cure Fakes, and

Cancer Cure Fakes. The American Medical Press.

Fake Consumption Cures. Metropolitan Life Insurance Co., 1 Madison Ave., New York City.

Habit-forming Agents. Farmers' Bulletin No. 393, Department of Agriculture, Washington, D. C.

Harmfulness of Headache Mixtures. Farmers' Bulletin No. 377.

CHAPTER VI

The School in the Country

The Function of the Country School.—All country boys and girls expect at some time in their lives to have large responsibilities of their own. It is important, therefore, that they learn in school many of the things that they will have to know when they become men and women. It is equally important that the schools teach such things.

A country school exists for one great purpose. That purpose is to serve all the people who live near it. It is not a place in which to teach fads, nor to try out all sorts of experiments on children. It is, or should be, a kind of workshop where children learn the things that will help them to have better homes, to be better citizens, and to enjoy life in a larger measure.

Of course every school will teach the subjects that every one must know in order to be a real member of a civilized community. Children must learn reading, writing, spelling, arithmetic, geography, and history. None of the additional activities mentioned in this chapter can take the place of these subjects. No amount of skill in these activities will make up to any boy or girl for ignorance of the things every one is supposed to know. There are, however, many things besides the regular studies that can

make the school worth more to its pupils and its community.

In some schools children learn blacksmithing, typewriting, elementary forestry, the arts of fruit culture, and of preserving fruits and curing meats, mat-making of shucks and straw, hat-making, weaving, dress-

A PRIZE SCHOOL IN THE KENTUCKY MOUNTAINS

When a school meets the requirements laid down by the state or county authorities, it is awarded a prize for excellence.

making, and almost everything that has to be done in a country home. Of course, no one small school can do all these things; but many schools do some of them. These latter schools endeavor to find just what the people need to know, and then to teach that thing.

In the old type of school almost nothing of this sort was done. Books were studied and book lessons only were learned. But in the newer type of school an effort is made to *do* things. What the children and the older

people ought to know how to do is ascertained, and an opportunity is given them to learn to do these things.

In this chapter we shall suggest some things that every boy and girl on the farm ought to know. They are things that concern not only young persons, but also their parents, their friends, and all other people

TRANSPORTING THE PUPILS OF A CONSOLIDATED SCHOOL IN HORSE-DRAWN VEHICLES

These pupils are not required to walk five or six miles to their homes after a day's work in school. They are transported at the public expense.

around them. We shall also suggest a number of things that may be done in the school to make it more effective in its work among the people.

How to Fight Diseases through the School.—Every school should be a life-saving station, and every boy and girl should become a life saver for the community. While in school, they should learn the simple rules of health. Moreover, they should learn where disease

and death lurk, and how to drive these two great enemies from the community.

What are some of the particular ways in which young people in the schools can help to prevent sickness? In the chapter on *Health and Sanitation* many suggestions are offered which may be put into practice

TRANSPORTING SCHOOL CHILDREN

Some of the school districts, which have the consolidated schools, use automobiles to take the boys and girls to and from school.

in the school as well as in the home. There are still other ways in which the children can easily coöperate with the teacher.

1. *See that the schoolroom is well heated and well ventilated.*

If the room is heated by a stove, that stove should have a "jacket" around it to make the heat uniform.

If the people who put in the stove know nothing about the "jacketed" stove, they can write to the State Department of Education, or to the Bureau of Education at Washington for bulletins concerning it. The heating stove without a "jacket" is one of the chief causes of bad colds among school children.

The room should be kept well ventilated. An opening can be made under the "jacketed" stove to admit the air. This plan will make certain the heating of the air before it reaches the children. If, however, there is no other means of keeping plenty of fresh air in the room, a window should be kept open all the time.

2. Give careful attention to the school water supply.

All wells and springs should be well protected from waste water and other surface drainage. Do not forget that death hides in old wells and poorly protected springs.

3. See that the schoolhouse and grounds are neat and attractive.

Rubbish of every kind should be destroyed. Disease loves nothing better than rubbish heaps and filthy spots.

4. Keep the toilets in good condition.

If they become bad, the trustee should be notified at once, and steps should be taken to repair them. It is important to have the right kind of toilets. Anyone desiring plans for a sanitary toilet may get them by writing to the State Board of Health for information, or to the United States Bureau of Education for

Bulletin No. 585. If the school has not a sanitary toilet, the district should build it at once. The health and morals of children are too precious to be endangered.

5. Invite the local doctor to give frequent health-talks to the school.

If possible, a doctor should examine all the children in school. Such examinations repeatedly reveal the presence of disease that hinders progress in school work.

Thousands of schools in both city and country are having this service every day. A doctor, or a nurse, or both, visit the school regularly, examine the children, and suggest to both children and parents means of avoiding sickness. In many places such examinations are made by teachers who have taken special training as nurses, in order that they may attend to such matters. In all instances the children can coöperate with the teacher to keep themselves and the whole community well.

Materials for examining the eyes and other parts of the body may be obtained from the State Board of Health, or from the American Medical Association, Chicago, Ill.

6. Get health bulletins and study them.

Free bulletins that explain the causes and teach prevention of the common preventable diseases may be secured from any of the following organizations:

The State Board of Health.
The State Department of Education.
The State Experiment Station.

The State Tuberculosis Commission.
The Department of Agriculture, Washington, D. C.
The American Medical Association, Chicago, Ill.
The Russell Sage Foundation, New York City.
The Society for the Study and Prevention of Tuberculosis, New York City.
The Metropolitan Life Insurance Co., New York City.

A boy or girl may write to any one of these places for the desired bulletins, most of which may be obtained free of charge. They may be taken from the school into the home and read there. In this way, everyone who attends the school will scatter good-health news abroad and will become a life saver.

7. Plan for a good-health day, occasionally.

Get the parents and other people together to talk about the best ways of preventing diseases. Various papers may be prepared by the children. Here are some topics for such papers:

How to Prevent Typhoid Fever.
How to Prevent Consumption.
How to Cure Consumption.
Fighting the House-fly.
How to Keep the Water Pure.
Some Things that Cause Bad Colds.
Taking Care of the Teeth.
The Value of Frequent Bathing.
Why Have Fresh Air in the Sleeping Room?
What to Do when You Cut Your Hand.
Dangers in Dust.
How Death Hides in Filthy Places.
How Play in the Open Air Saves the Doctors' Bills.
How to Build a Sanitary Outdoor Toilet.

Other topics will be suggested by local conditions.

The School and the Home Vegetable Garden.—One reason why so many people in the country suffer from poverty and poor health is that they do not produce enough in the garden to supply the table during the winter. During a large part of the year they live on the three or four food products most easily preserved. Some of these are excellent foods if well

NOT ALL BOOKS!

In some schools the teacher and pupils are interested in farm problems. These boys and girls were studying seed corn.

prepared; but if poorly prepared and if eaten with little change for long periods, they are almost certain to prove unwholesome. The same sort of food prepared in the same way throughout the winter and spring results in poor health and heavy doctors' bills. Yet, in spite of the repeated ill effects of such a diet and of the fact that they live in the country where garden space is abundant, these people use few fresh vegetables in the winter season. The lack of sufficient well-prepared food brings about a weakened condition

that makes them the prey of grippe, pneumonia, typhoid fever, consumption, and other diseases that sap the vitality and destroy the life.

A good vegetable garden is the remedy for many of these ills. A great deal of the sickness of country people can be prevented in the home garden and on

A GIRLS' CANNING CLUB AT WORK
The girls are canning tomatoes which they raised during the summer.

the kitchen stove. Every boy and girl can help in this home-garden movement, which is receiving emphasis in thousands of schools all over the land. Boys and girls are learning how to raise more beans, carrots, parsnips, strawberries, sweet corn, tomatoes, peas, and numerous other vegetables. In the interests of better health and a lower cost of living, they are learning, too, how to take care of their garden products.

Storing Garden Products.—It is, indeed, just as important to know how to take care of vegetables and fruits as it is to know how to raise them. Somebody knows how to keep white potatoes all through the winter, for they may be bought at almost every country store in the spring. People know, also, how to keep sweet potatoes and apples and other fruits and vegetables. It is highly important that every boy and girl, and everybody else who lives on a farm, should learn the best ways of storing garden products through the winter, in order that they may have a well-balanced food supply and more money for other necessities.

All this may be accomplished when children spend less time on some studies that they never will use and devote more time to the study of books on gardening, farming, and fruit culture, and on farmers' bulletins that tell how to raise more fruits and vegetables and how to care for them. These bulletins may be obtained free of charge from the Department of Agriculture at Washington. Others may be secured from the State Experiment Station at the state university. Here are some that are issued from Washington:

No. 33. Peach Growing for the Market.
35. Potato Culture.
61. Asparagus Culture.
112. Bread and Bread-making.
113. The Apple and How to Grow It.
121. Beans, Peas, and Other Legumes as Food.
129. Sweet Potatoes.
154. The Home Fruit Garden: Preparation and Care.
156. The Home Vineyard.
157. The Propagation of Plants.
175. Home Manufacture and Use of Unfermented Grape Juice.

181. Pruning.
198. Strawberries.
203. Canned Fruit, Preserves, and Jellies.
218. The School Garden.
220. Tomatoes.
229. The Production of Good Seed Corn.
247. The Control of the Codling Moth and the Apple Scale.
253. The Germination of Seed Corn.
254. Cucumbers.
255. The Home Vegetable Garden.
257. Soil Fertility.
293. The Use of Fruits as Foods.
359. Canning Vegetables in the Home.

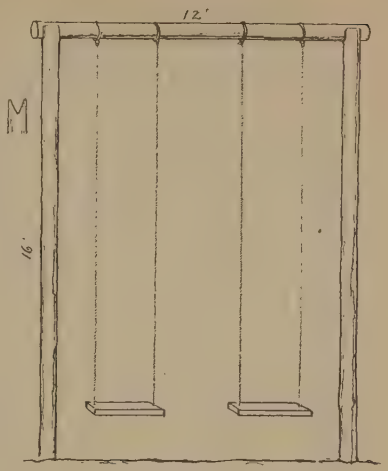
Any or all of these, as well as others pertaining to various duties on the farm, may be had for the asking.

Woodwork and Furniture Making in the School.—In the chapter on *Household Arts* we shall learn about some of the useful articles that can be made in the home workshop. This constructive work can be done in the schools also; and the children can encourage it among their parents and friends. Tables, chairs, baby-beds, taborets, shelves, picture frames, bookcases, and writing desks can all be made with little difficulty.

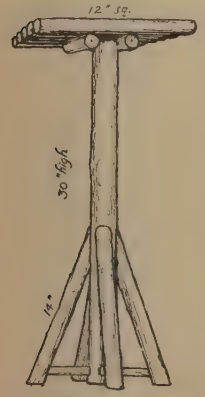
The making of rustic furniture is especially to be desired, and may easily be encouraged. Many homes have no outdoor seats, no swings, no stands for flowers, no arches or summer houses for climbing vines, no big comfortable chairs. The furniture consists of the merest necessities, and often even necessities are lacking.

Expense Very Slight.—Now, almost any kind of rustic furniture may be had for the making. Many homes are located near forests or wood lots where an

abundance of small hickory, sassafras, sourwood, oak, ironwood, laurel, and other growths abound. Any of this wood will supply excellent material for chairs, settees, couches, swings, taborets, lampstands, tables, and other articles of furniture, which can be made at little or no cost. Bushes frequently grow up in pastures and have to be cut away and burned. It is an easy matter to select the necessary material from such a source. A few cents' worth of nails will enable a boy to make twenty-five dollars' worth of furniture.



SWING
Made of locust or oak at a cost of about fifty cents.



A RUSTIC TABORET
This can be made of the saplings found in the fence corners and costs about one cent.

For making such furniture, a handsaw, a hatchet, a brace and two or three bits, a one-inch chisel, and a drawing knife are needed. Five cents' worth each of No. 6 and No. 8 finishing nails will complete the equipment. The poles may be secured from the woods. To be most serviceable the poles should be cut during

the winter season—between the middle of October and the first of March. If they are cut at other times, the bark is likely to peel off. They need little seasoning and require no varnishing.

The chairs are made the height of ordinary chairs; the tables may be made the height of the dining table; lampstands, taborets, and flower-stands may be made any desired height. There is no reason why seats of various kinds for the school room and yard should not be made of these small poles. Other furniture for the schoolroom may be had at almost no cost—and the children and the teacher will have the fun of doing the work. The cuts shown in this and other chapters suggest some articles that may be made. Every boy and girl who learns how to do this simple work will be able to add much comfort and joy to the home.

The School and Recreation.—The boys and girls in every school should coöperate freely with the teacher in planning for plenty of fun and recreation. School life without play becomes exceedingly dull and uninteresting. Both indoor and outdoor games have their place. Special play apparatus is needed. This may be made from poles cut in the woods, or from material secured at the sawmill or lumber yard. It should be made according to very simple designs, in order that expenses may be kept down. Under the direction of the teacher, the boys can easily make all the playground apparatus that the school needs. In the majority of country schools, only such apparatus ought to be erected as the boys themselves can make.

Information about making simple apparatus may be obtained from the following sources:

The State Playground Commission.
The State Department of Education.
The United States Bureau of Education at Washington.
The Playground Association of America, New York City.
The Russell Sage Foundation, New York City.

See-saws, merry-go-rounds, giant-strides, swings, trapezes, horizontal bars, hurdles, ladders, poles for climbing, and other pieces of apparatus may be had for the making. A postal card to Spalding Bros., Chicago, Ill., will bring their catalog of sporting goods, which contains many suggestions concerning the school playground.

Besides the games and the playground apparatus, frequent social gatherings for the people of the community may be planned. Here are some occasions that will bring them together:

Spelling matches.	Sewing clubs.
Singing contests.	Meetings for making presents.
Speech-making contests.	Canning day.
Field-day sports.	School picnic.
Literary society.	Health day.
Mothers' meeting.	Farmers' meeting.
Pig-club day.	Poultry day.
Corn-club day.	Flower day.
A school exhibit.	Temperance day.
Civic improvement society.	Musical entertainments.

Other opportunities may also be used to assemble the people and help them to have a good time. Every boy and girl who assists in planning and carrying out a program for such occasions will not only share in a

good time, but will learn to do something to make the whole community prosperous and happy.

Further suggestions may be obtained by consulting the chapters on *Play and Recreation.*

The School and Other Activities.—The school should, if possible, share in all the worthy activities of the community. Few things occur in real farming districts in which boys and girls cannot take part. They can, therefore, help to make the school serve the people in the largest way. They can help to make it a sort of clearing house, or center, where the people of the locality may get the knowledge that will most nearly satisfy their needs.

They may assist, also, in securing a school library of well-selected books that shall bring new ideas and inspiration to the people. The books may sometimes be borrowed from large libraries that make a business of sending out small circulating libraries to schools, women's clubs, granges, farmers' clubs, and other social and coöperative organizations. Such libraries as these are often purchased by school boards; but, in many instances, they are secured by teachers with the help of the pupils. A pie supper, a box supper, a musical or some other kind of entertainment is given to raise the necessary money. Also, numerous bulletins on the subject of libraries are secured from the sources already mentioned in this and other chapters, and are distributed among the people, in order to enlist their interest. In the same way are obtained pictures, mottoes, and other decorations for the schoolroom, and flowers and shrubbery for the grounds.

Enterprises such as these are engaging schools everywhere; and the boys and girls in the schools are doing their part. In addition to the regular course of study, many activities are introduced which adapt the course more fully to the needs of the community. Every boy and girl in the land has the opportunity to help the school to be a place of service to the people; and tens of thousands of them are responding to the leadership of devoted and well-trained teachers and are doing the things that will add happiness and prosperity both to themselves and their community.

QUESTIONS FOR DISCUSSION

1. Take an hour to talk over things you need on the playground, and make plans for getting some of them erected. Have you written for the bulletins on playground apparatus?

2. Organize a Literary Society. Elect a president, a vice-president, a secretary-treasurer, and appoint a program committee.

3. Make out a model society program, and discuss some topics that you think would be good for debates, short talks, and society papers.

4. Cut a handful of grafts from an old apple tree. Learn from the bulletins you have how to graft them.

5. Make a study of the old ballads which are sung in the community. Collect them and write them out in note-books.

6. Collect some of the old hunters' stories and write them out.

7. Arrange an evening program that shall consist of old hunters' stories and old ballads. Ask the older people to help out.

8. Plan for a Household Arts Day. Arrange an exhibit of the handiwork of the school children and of the people in the community.

The following list suggests things to have:

Aprons, handkerchiefs, caps, dresses, socks, and other clothing made by the children. Patchwork and other repairs.

Centerpieces, pillow-covers, hammocks, spreads, quilts, comforters, and crochet work of all kinds made by the children and their mothers.

Woodwork of all sorts made in school and in the community.

Swingletrees, hoe handles, windmills, water wheels, rolling-pins, feed-troughs, farm gates, mauls, seed-testing boxes, chicken-coops, and other things used on the farm.

Chairs, tables, swings, cots, taborets, flower-stands, and other pieces of furniture made of sassafras or hickory poles.

Tables, desks, bookcases, chairs, and other pieces made of walnut, oak, cedar, and other kinds of wood.

Baskets of oak splits, hickory bark, willows, raffia, reeds, and other material.

Chairs and swings with bottoms and backs of oak splits or hickory bark.

Picture frames, doll-beds and houses, leather work, articles of copper, brass, german silver, etc., and toys of all sorts made by the children and their parents.

Looms, reels, spinning-wheels, rugs, carpets, coverlets, towels, and other materials made in the neighborhood.

9. At the Household Arts Exhibit ask some of the older people to tell about handwork in pioneer homes.

Here are some suggestive topics:

How to dye wool with native herbs.
Making an old-fashioned loom.
How to weave blankets.
How our grandmothers made linsey-woolsey.
Hand-made beds.
The days of the "battling-stick."
Soap-making when grandmother was a child.
How our forefathers cured and tanned hides.
The songs of grandfather's boyhood.

10. Plan for a Housekeepers' Day. Arrange an exhibit of fruits, vegetables, bread, canned goods of all kind, and other foods prepared in the school and the homes.

The following list of articles is suggestive:

White bread, graham bread, cakes, soda biscuit and beaten biscuit, cornbread, pies, custards, doughnuts, cookies, gingercakes, etc.

Canned fruits, jellies, and preserves.

Pickles and relishes.

Canned vegetables of all kinds produced in the gardens of the community.

Apples, potatoes, pumpkins, squash, and other uncooked fruits and vegetables.

Various kinds of choice dishes prepared from recipes obtained at school.

Butter, eggs, milk, cured meats, etc.

Methods of storing fruits and vegetables for keeping over winter. Ask some people to tell about these in particular.

A Babcock milk tester in operation, and a cream separator.

Charts showing the values of certain foods. These may be obtained from the Department of Agriculture at Washington. The best are the Dietetic Charts, prepared by C. F. Langworthy. Fifteen for one dollar.

Ménu charts worked out by the students.

Recipe books prepared at school.

A book of suggestions for removing stains—ink, paint, grass, fruit, mildew, iron rust, grease spots, etc., from clothing and linens.

Another book of suggestions for mixing whitewash, for enameling and painting furniture, for cleaning furniture, waxing and varnishing floors, graining woodwork, mixing cement for walks, bins, vaults, etc., and for cementing walls.

11. At this Housekeepers' Exhibit have short talks and papers on topics such as these:

How to remove grease-spots, fruit-stains, etc. from cloth.

How to make white bread.

How to make salt-rising bread.

How to cure country hams.

How to make fruit cake, angel's food, sponge cake, etc.

How to make doughnuts, ginger cookies, and other cookies.

How to keep white potatoes, sweet potatoes, carrots, turnips, etc. through the winter.

How to make bread and cakes containing walnuts, hickory nuts, blackberries, chestnuts, and other native nuts, etc.

How to make choice pickles and other relishes.

Lengthen this list out to include other methods of storing fruits, or preparing them for the table. This is the kind of knowledge that housekeepers ought to have.

12. Organize a Civic Improvement League. Elect president, vice-president, secretary-treasurer, and appoint an executive committee.

13. Make a study of roads, fences, flower-beds, flower-boxes, walks, old barns, and other things attractive and unattractive in the community, and talk over ways of improvement.

14. Organize a Community Playground Commission. Elect president, vice-president, secretary-treasurer, supervisor, and appoint an executive committee.

15. Make a study of all games that the children and their parents know how to play. Write out the rules for these.

16. Have a Little Mothers' Meeting, and invite all the mothers and other women of the community to attend it. Exhibit clothing made by the girls for dolls and babies. Have doll-furniture made by the boys. Have a cradle or bed for a baby made with screens to keep away flies.

17. Have papers and talks on subjects like these:

How to bathe the baby.
The way to dress a baby.
How to care for baby's bottle.
Proper feeding for a baby.
The way to care for baby's clothes.
Good playthings for the baby.
Plenty of drinking water for the baby.

Write for information about care of babies to these places:

The Russell Sage Foundation, New York City.
The Metropolitan Life Insurance Company, New York City.
The United States Public Health Service, Washington, D. C.
National Child Welfare Exhibit Association, 70 Fifth Avenue, New York City.

18. Make boxes for testing seed corn. Make racks for holding the ears. Select good seed ears from near-by fields. Test some of the corn later and record the results.

Write to the International Harvester Company, Chicago, and ask for a copy of the bulletin on seed corn. Secure other bulletins from the Department of Agriculture at Washington, and from the State Department of Agriculture.

19. Plan for a Good Roads Day. Talk it up among the people of the community. Invite the parents to come and help make a piece of good road near the schoolhouse, or to repair a piece of bad road. If possible have dinner on the ground. Have more work than talk on this occasion.

20. Plan for a Good Health Day. Invite the people of the community to come. Have papers and talks on various subjects relating to

health. Consult the chapters and suggestions on health elsewhere in this book.

21. Plan a Day for the Farm Animals. Have papers and talks on such subjects as:

How to prevent hog cholera.
How to cure gapes in chickens.
A balanced ration for horses and cattle.
Making the cow pay her board bill.
Care and feeding of hogs.
Diseases of cattle.
Diseases of sheep.

Write to the State Experiment Station, and to the Department of Agriculture at Washington and get free bulletins about animal diseases. Write to the State University and ask that a man come to talk to the farmers on the care of animals.

22. Plan for a Field Day. See suggestions in the chapters on play and recreation.

Plan for other activities that will take the work of the school right into the homes of the people. The school exists for no other reason but to serve the people of the community. Every boy and girl in the school has an opportunity to coöperate with the teacher in making it do so.

CHAPTER VII

Boys' and Girls' Clubs

Agricultural Clubs for Farm Boys and Girls.—In connection with the home-garden work both teachers and students naturally become interested in the organization of various agricultural clubs among the farmers and their children. Interest in such work is growing rapidly throughout the country and excellent results are invariably seen.

THE PRIZE WINNER

This young man won the stock-judging contest. The bull was the prize given to the winner.

Among the most popular organizations are the farmers' coöperative societies, corn clubs and pig clubs for boys, canning clubs for girls, and poultry clubs for both boys and girls. Credit for the origin of this great movement to organize the farm people into coöperative groups is due to the United States Department of Agriculture. It has long been felt by many of the agricultural leaders that something should be done to instruct the people how to take better care of the

land and at the same time how to make it yield more foodstuffs. It has also seemed necessary to take steps to convince many farm boys and girls that the farm can be made to yield them a good living, and that life on the farm is really worth while. So during the last few years the Department of Agriculture has been coöperating with the state departments of agriculture and the educational agencies of the states in bringing important information direct to the farmers. It has also been organizing farm boys and girls into groups for growing larger quantities of food and creating more interest in farm life.

SHOWING THE BOYS HOW TO SELECT THE SEED CORN

The county farm demonstrators will help the boys who wish to learn about raising corn.

Corn Clubs.—The corn club is one of the most popular of these farm organizations. The chief object of these clubs is to convince the boy and the community that larger rewards will come to those who cultivate the soil in a scientific way, to inspire boys and their friends with a love of farm life, to put before them a definite and worthy purpose and to stimulate a friendly rivalry among them. Another object is to convince rural school teachers that it is worth while to correlate the work in the school with the work on the farm and make

the school a place where the children can learn the things they need to know in order to be successful in farm work.

Tens of thousands of farm boys enroll as members in corn clubs every year. The clubs are usually organized under the direction of the local farm demonstration agent if there is one, and if there is not, under the direction of the superintendent of schools and other school officers. All these officers commonly work together to secure the desired results.

The organization of these clubs is very simple. The names of the boys may be secured by their teacher or anyone else, and sent to the proper person. They must be between ten and eighteen years of age. They must agree to study the special instructions prepared for them, must plant and cultivate an acre or more of corn, must exhibit a certain amount of the mature corn at a fair, must keep records of the cost of cultivation, and comply with the other requirements laid down by the agent.

All the details of organization are mentioned in bulletins and letters sent out by the Department of Agriculture, Washington, D. C. Anyone wishing to secure these bulletins and letters should write to the agent in charge of the state work, or to the Department of Agriculture at Washington. If there is a local demonstration agent the information may be obtained direct from him.

Various awards are usually offered to encourage boys in this work. Money for these awards is usually contributed by bankers and other business men in the

community where the boys live. Among some of the popular awards are a trip to Washington, trips to expositions and to state and county fairs, scholarships in agricultural schools, buggies, bicycles, shotguns, registered calves or colts, various improved farm implements, gold coins, etc. These awards are distributed publicly at county fairs or school fairs or wherever the exhibits are held.

Badges and emblems of various kinds are often employed to stimulate interest. Some clubs have buttons with the name of the county and state and the year on them. Others use an emblem consisting of a small pin or badge in the shape of a book with a four leaf clover stamped on it. On each clover leaf is the letter "H". These four "H's" signify the training of the head, heart, hands, and health.

THE WORKER'S REWARD
The prize winners of the farm clubs at Mount Vernon.

All the boys who enter the clubs receive letters containing advice about the best methods of preparing the soil, the kinds of fertilizer to use, the methods of cultivation, etc. Detailed instructions are furnished about choosing and testing the seed corn before it is planted. The boys also come together two or three times a year, or oftener if possible, to listen to special instruc-

tions from the local agent. When a certain amount of study has been completed they frequently take examinations which, if passed successfully, entitle them to certificates furnished by the agent in charge of the state work.

Pig Clubs.—Another farm organization which is growing very rapidly is the boys' pig club. This is

WINDING UP THE SUMMER'S WORK OF A PIG CLUB

The farm boys have been caring for the pigs all summer and now the judges are awarding the prize.

especially adapted to the South and the great corn-growing sections of the middle West. The objects of these clubs are to stimulate an interest in the production of hogs, to increase the number of hogs on the farms, to insure a home-produced supply of meat and lard, to instruct boys in the care of farm animals in general, and to afford an opportunity to the boys and their parents to increase their income.

In organization the pig clubs are very similar to the

corn clubs. The names of boys who wish to join are secured by the teacher or special agent if there is one. At a public meeting the officers are chosen and the organization perfected according to the directions furnished to the agent or teacher. These directions may be found in Farmers' Bulletin, No. 566, issued by the Department of Agriculture at Washington.

Through the efforts of the agent and the local business men the boys secure thoroughbred pigs and immediately begin to care for them. Special instructions are furnished to each boy by the teacher or the agent in charge. These instructions cover practically everything one needs to know about hog raising. They thus constitute a very important phase of farm education.

Canning Clubs.—No less important are canning clubs among the girls. Thousands of schools throughout the country, especially in the South and West, are organizing the girls into canning clubs and are encouraging them to produce tomatoes and other vegetables and can them for winter use and for the markets. In this way the growing of more vegetables for the home table is encouraged and the cost of living is considerably lowered.

Whenever it is possible a special agent, usually a lady, is appointed by the agent in charge of the state demonstration work to organize the girls into clubs and instruct them and their mothers in the best ways of raising and canning fruits and vegetables. This agent coöperates with teachers and other people of the countryside in her work. She, like the farm demonstrator, visits farm homes and schools and enlists the

girls and their mothers in this all-important work. She assists the girls in securing cans and canning outfits and gives advice about storing and marketing the product. Special exhibits of canned fruits and vegetables are planned in connection with the corn and other exhibits at the county and school fairs. Prizes and other awards are distributed to those whose work is superior.

Poultry Clubs.—The poultry club is the last of the special organizations for farm boys and girls that we shall mention. As in the case of the other clubs, the boys and girls who enter poultry clubs must be of certain age, and must agree to comply with the directions laid down by the agent or teacher who directs the work.

The business men of the community are usually interested in the work, and through their assistance the eggs of thoroughbred chickens, ducks, turkeys, and other farm fowls are secured and distributed at a small cost among the club members. These eggs and the young fowls hatched from them are cared for according to instructions furnished by the agent or teacher to all club members. When the fowls are grown up, exhibits are planned at fairs, and prizes are given to those whose work has been most satisfactory.

Through these various clubs a practical educational work of great value is being carried on among farm boys and girls, and incidentally among the farmers themselves. It is a work that deals with vital things in a very vital way. Country schools everywhere are rapidly taking up club work and are seeking every opportunity to coöperate with local and state agents in

carrying on this business of proving to farmers and their children that there is more reward and more joy in farm life than millions of farmer folk had ever dreamed of.

General Farm Demonstration Work.—As has already been said, the various clubs for farm boys and girls are organized as a part of the great work of the United States Department of Agriculture in coöperation with the different state universities, with some private institutions, and with the public schools. What has been said thus far applies chiefly to the boys and girls of the farm and is of special interest to all young people of school age. But in this great country-wide movement the farmers themselves are by no means forgotten. Through a highly organized system called the Coöperative Extension Work in Agriculture and Home Economics, the department has for many years been conducting an educational campaign among the farmers of the land with most gratifying results.

Under special acts of Congress large sums of money are appropriated for this work. Special agents are appointed in the different states who work with the agricultural forces in the state and recommend other agents for appointments in townships and counties. They coöperate with all the public educational forces and employ every reasonable means within the law to carry out this great work among the people on the farms. The salaries of these workers are usually paid partly by the state and partly by the federal government.

The leaders who come into closest touch with the

farmers are the county or local demonstration agents. These are usually graduates of agricultural schools and are especially equipped for their work. Part of the funds for paying their salaries is provided by the federal government and part is appropriated by the government of the counties in which they work.

Their duties are many indeed. They visit schools

NEVER TOO OLD TO LEARN
The farm demonstrator telling the farmers the best ways to feed cattle.

and educational gatherings of all kinds where they talk to children and their parents about the most improved methods of growing crops and caring for the crops and farm animals. They organize farmers' clubs, various clubs among boys and girls, give courses of instruction on farm subjects, and advise farmers on all sorts of farm problems. They secure the coöperation of a number of farmers in the county who cultivate a few acres under special directions adapted to that par-

ticular kind of soil. These acres constitute the demonstration plots. By using different kinds of fertilizers and employing different methods of cultivation, the farmers learn from these experiments on the plots what special kinds of fertilizers and what methods of cultivation are best for their land.

Nor is this all. The agents are expected to know about the diseases of farm animals and the best methods of treating or preventing them. Farmers are taught how to vaccinate hogs to prevent cholera, how to prevent blackleg in sheep and foot-and-mouth disease and other diseases in cattle. They are likewise instructed in regard to the diseases of fruit trees and vegetables and the remedies for all such diseases. They become acquainted with markets and approved methods of marketing fruits and vegetables. They are encouraged to organize coöperative buying and selling unions, to secure thoroughbred stock, and to purchase the most approved kinds of farm implements. Their wives receive special instructions about the care of milk, poultry, fruits, and other products of the farm. In fact, the demonstration agents are supposed to assist the people of the farm in every possible way in making the farm a better place to live.

In all this important work the public schools have a great part. The agents work through the schools, and the schools work with the agents and the people of the surrounding country. Thus a spirit of coöperation is fostered that goes a long way towards doing away with many of the obstacles to a successful life on the farm. And the work convinces farm boys and girls that the

soil contains great treasures for willing workers and great joy for those who labor on it in a spirit of appreciation and love.

Any teacher in the rural schools may organize any of the clubs that have been mentioned, and any boy or girl in the country schools may participate in them under the conditions laid down by the agents in charge of the work. Those who desire to organize any of the clubs should communicate with the local demonstration agent and get from him the necessary information. If there is no such agent in the county, full information may be secured from the head of the extension department of the state university or from the Department of Agriculture, Washington, D. C.

COMPARING RESULTS

Two young potato raisers are having a consultation as to the best methods of potato raising.

CHAPTER VIII

Play and Recreation

The Necessity for Play.—All boys and girls who are in good health like to play and to have a good time. They want to run, laugh, climb trees, and play group games. If a creek is near, the girls want to wade in it, and the boys want to hurry away to the old swimming hole. In winter, when the creek is frozen over, they want to skate and slide together on the ice. During the summer time, if the church or the Sunday-school or the day school or the grange plans a picnic, all want to go. If there is a ball game or a circus near at hand, they cannot be kept away.

This desire to run and play and shout is nature's way of keeping the young strong and healthy. Their bodies need exercise and their minds need wholesome diversion. The heart must beat rapidly very often, in order to grow strong and to furnish an abundance of blood to all parts of the growing body. The lungs need vigorous exercise if they are to develop properly. The whole body must perspire freely and often, so that it may keep pure and free from poisons. Moreover, when perspiration is free, it is necessary to wash the impurity from the skin to keep it healthy. Every healthy boy enjoys vigorous play, and he feels benefited when the play is over. He

feels a still greater benefit if he takes a bath after the exercise.

How Play Develops Character.—Every child will need in after life all the strength, the health, and the helpful experience that he gets while at play. The skill which the hands and arms acquire while throwing balls will be useful in handling tools. The good judgment and sense of fair play which the boy develops on the playground will help him in dealing with his neighbors, and will make him a better citizen. The poise and self-control which he learns while swimming a deep river, or climbing a dangerous tree, or riding the bucking calf or the young mule will help him to take care of himself, when he undertakes difficult things later in life. If he has to deal with dangerous stock, to fight the old ram occasionally, escape from a biting hog, or hasten over the fence to get away from a mad bull, he will develop a degree of caution that will enable him to take care of himself in dangerous situations.

The strength and fiber that are put into his character by play, the experience that he acquires by associating with other boys and girls and by indulging in friendly contests with them will prepare him for the serious duties of manhood. The same thing is true of a girl. Playing fair and sticking to the rules of the game will help to make of any boy or girl an honest man or woman. Playing in group contests will teach every child the value of team work. Laying aside work and worry, and playing in care-free fashion will keep both body and mind in the healthy condition that prepares

every youth to do his share of the world's work with pleasure and satisfaction.

A Recreation Program Needed.—In making out a program for work on the farm, each boy and girl should reserve plenty of time for play. It must be remembered that play is as necessary as work; and, though many people regard it as idleness, every man will sooner or later discover that he cannot work as well without play as with it. A half-holiday at a baseball game, an hour or two in the old swimming hole, a day spent in the woods, at a picnic or a rabbit hunt will give to every man and boy new life and a tenfold enjoyment of his work. Such pleasures as these, which give zest and relish to the work-a-day life of the farm boy and girl should be planned for with as much regularity as the farmer plans for going to mill or for having the horse shod.

Of course there are seasons, such as the harvesting season, hay-making time, berry-picking days, etc., when the boy on the farm cannot afford to stop work for a holiday; but these seasons are not long and they are not without their fun. A group of farm boys, chasing young rabbits over the wheat field or clover field when mowers or reapers are nearing the end of their labors, derive as much enjoyment from this sport as they would from a holiday on the river. And when the time for gathering apples comes, the hard work of bending over and carrying baskets is lightened by the fun of climbing trees and creeping out on treacherous limbs to pick the choice fruit.

Recreation in the Farm Home.—Recreations and

pleasures of all kinds on the farm should center chiefly about the home. Many young people, especially young men, who stay at home and work during the week, go away when the week's work is done to seek their pleasures in the towns. The opportunities for pleasures in the home are too few to keep them there. If home on the farm, then, is to be a place that holds all that is

A STORY-TELLING GROUP IN THE OPEN AIR

The rest period in recreation relaxes the muscle-strain and at the same time improves the mind with tales from fiction or history.

dear to a boy, if he hopes to remember with joy when he grows old the life in the home of his youth, he must coöperate with father and mother and the other members of the family in plans for recreation by the fireside.

It is largely the duty of the mother to make these plans; but the mother on the farm may not have had the special training that prepares for such a duty. Even in the case of those mothers who have had special training, it is usually true that the labors of the day have left them too greatly fatigued to plan for social pleasures in the evening. Knowing this, it

becomes the duty of every boy and girl to assist in the day's work in every possible way, in order that the mother may have more time and strength to plan for the social hour.

The Social Hour.—Every home should have a social hour—a time when the family can come together to talk over the experiences of the day and enjoy the best that family life has to offer. This hour is as important as the time reserved for breakfast, dinner, or supper. The day's work being over, there should be songs and instrumental music. There should, if possible, be reading, games, and story-telling. The successes of the day just past and plans for the morrow should be discussed; and all the deeper things of life that make toil less burdensome and bring more cheer to human hearts may be dwelt on.

Once, when a man of nearly sixty was asked by a young lady to tell her what he had most enjoyed in his childhood home, his face lighted up as he replied:

> Aside from the love and care which my father and mother gave me, I think I remember most pleasantly the social hour by the fireside. We had a big fireplace, and in winter it always contained a roaring wood fire. After the day's work was done and supper was over, we all gathered in the living room about the big hearthstone to talk over the happenings of the day, read stories or tell them, sing, and play games. Mother never would allow us to repeat bad things that we heard about the neighbors. I wondered then why she did this, but now I know.
>
> Both father and mother were good story-tellers.

Father had been a great hunter and loved to tell of the days when he went with neighbors to take a stand, while some of the party with dogs "jumped" a deer. Or he talked of days when he wandered alone through the woods, shooting squirrels or wild turkeys, or stalking a bear. He had seen much of the hard life of pioneers, and told us all about the clearing of new grounds, log-rollings, house-raisings, corn-huskings, and other activities among the people when he was young.

My mother was a lover of literature and music. She told us stories from the Bible, from Æsop, the Grimm Brothers, and other great story-writers. We never grew tired of hearing about Little Red Riding Hood, Sleeping Beauty, Joseph, the Babe Moses, Daniel in the Lions' Den, the Lion and the Mouse, and other favorite heroes. We wept over Bluebeard's wives, and always kept an eye on the dark corner under the bed, when she told us stories of ghosts or other "spooky" things.

And then we had lots of songs and games. We played blindfold, puss-in-the-corner, black-sheep, checkers, dominoes, snap, and had romps of many kinds. I love now to hear such songs as *Old Black Joe, Silver Threads Among the Gold, Drink to Me Only with Thine Eyes, In the Gloaming, Annie Laurie, The Ship that Never Returned,* and others that mother used to sing. Sometimes neighbors would come in and sing with us; but I always liked it better when the family was alone. Mother seemed rather bashful about singing before company; and somehow it always got closer to me when no one was there to distract our attention from the family circle.

A lady, too, was asked one day to tell what she

remembered most pleasantly about her childhood days. She thought for a moment, and then said:

I think it was the good times that father and mother used to make us have. There were a dozen of us children, as you know; and we were all strong and healthy and wild as young mules. We surely did have a good time even though there was lots of work to do. There was a millpond near the house where we used to swim, go fishing and boating in summer, and skating in winter. I remember how Jess and I used to get into an old evaporating pan for a boat and hunt ducks' eggs along the banks.

Father was a very busy man, and mother certainly had her hands full with a dozen children to take care of; but they somehow always found time to go with us on fishing trips, picnics, and other hikes. Every summer, before the older boys and girls were married, father and the boys used to hitch up the team, put the cover on the wagon, get old quilts and blankets, a few pots and pans, a little bacon, flour, and the fishing tackle, and take the whole family off for a week or two on a fishing trip. Father seemed to know every old shack along the river; so we would find one of these, pile our "duds" on the floor, fish and swim all day, eat like pigs, and at night sleep to our heart's content. If it rained, father and the boys would go out and hunt squirrels, while mother and we girls stayed in the shack and told stories. We climbed all the beech trees, rode on all the hickory bushes in the neighborhood, and carried many a blue spot home from bumps received in falling from grapevine swings.

There was never a dull day at these fishing camps. It mattered not what happened during the day, we

had a good time. We were always dead tired at night, and hated to get up in the morning.

Of course we had lots of company and music in our home; but I think that if I had to live over again my childhood days I should welcome most of all the picnics, hikes, and fishing trips that we all enjoyed so much. When my children get older I am going to see that they have some of the good times that I enjoyed so much when I was a little girl.

How to Make the Social Hour Profitable.—Such testimonies make it easy to recognize the value of the social hour in the home. It is a time to talk, to laugh, and to sing; a time to tell stories, to read, to roast apples, to play games, and to have instrumental music. There are many ways of making the home hours attractive.

The first of these is story-telling. Long before any history was written, the story-teller was a popular man in the community. In all ages, people have gathered around him to listen to tales of adventure and heroic deeds. There is something of the divine in a great story. It grips and holds us like a great purpose in life and often inspires us to noblest endeavor.

The battlefields of old have furnished some of the most thrilling stories of all time. Millions of boys and girls have been prompted to heroic deeds by the exploits of Hector, Achilles, Ulysses, Menelaus, Paris, and Agamemnon.

Some of our greatest heroes are identified with the religions of ancient peoples. Boys and girls never tire of the wonderful labors of Hercules, of music-

loving Apollo, of Diana the huntress, of the far-wandering Siegfried, the mighty Thor, the brave Beowulf, and the Knights of the Round Table. The youth who does not read or hear the stirring tales of these heroes misses one of the greatest joys of life.

There are, too, the great Bible heroes. The stories of Adam and Eve, Noah, Abraham, Jacob, Joseph, Ruth, Esther, Samson, and Daniel have inspired millions of earth's noblest people.

In later times, the American wars with Indians and with foreign enemies have furnished stories full of thrilling interest. The days of the pioneers who hunted big game, who cleared away trees and built log houses, who fished, and tilled the virgin soil for a living have provided tales rich with adventure. But the men and women who told the tales—themselves a part of those history-making times—are gone from many sections of the country. Instead of going to grandfathers and grandmothers, young people now must turn to books for the stories of those earlier days that brought so much joy to the fireside.

In recent years, the whole range of literature of many nations has been searched to find the best stories for young people, and choice selections have been culled and brought together in handy volumes for the home. The great folk-tales—those old fireside stories that have been handed down by word of mouth for centuries—have been collected and written out by Joseph Jacobs, Hans Christian Andersen, the Grimm Brothers, Perrault, and others. There is, therefore, no lack of good stories within easy reach of everyone.

The following books contain many of the most popular fireside stories:

1. *The Bible.*
2. Hurlbut's *Story of the Bible.*
3. *The Children's Book.* By H. E. Scudder.
4. *Fairy Tales.* Hans Christian Andersen.
5. *The Arabian Nights.*
6. *The Jungle Book.* By Rudyard Kipling.
7. *Just-So Stories.* By Rudyard Kipling.
8. *Tanglewood Tales.* By Nathaniel Hawthorne.
9. *The Blue Fairy Book.* By Andrew Lang.
10. *Grimms' Fairy Tales.* By the Grimm Brothers.
11. *The Queen's Museum.* By Frank R. Stockton.
12. *The Story of the Greeks.* By Helene Guerber.
13. *Wild Animals I Have Known.* By Ernest Thompson Seton.

The Uncle Remus Stories, by Joel Chandler Harris, contain the best folk stories of the American negro, and should be in every home in the land. One teacher who has had much experience in story-telling says: "Of the many stories which I have read and told to country boys and girls, the *Uncle Remus Stories* are by far the most popular." *The Adventures of Tom Sawyer, Huckleberry Finn, Innocents Abroad,* and other books by Mark Twain contain some of the choicest humor and rarest bits of philosophy that America has produced. *The Children's Hour,* a set of books edited by Eva Marsh Tappan, and published by Houghton, Mifflin & Co., is perhaps the best handy volume collection of famous stories.

It will not be possible for every home to have all these books; but every one should have some of them. If six of these were to be chosen first, no mistake would be made in selecting the following:

Scudder's *Children's Book.*
Harris's *Uncle Remus and His Friends.*
Hawthorne's *Tanglewood Tales.*
Andersen's *Fairy Tales.*
Kipling's *Just-So Stories.*
The Arabian Nights.

All of these books contain stories that are good to read and to tell. Some of them that boys and girls always love are *The Old Woman and Her Pig; Jack and the Bean Stalk; Little One-Eye, Two-Eyes, Three-Eyes; Beauty and the Beast; The Fisherman and His Wife; Brer Rabbit Frightens Brer Tiger; The Cat that Walked by Himself; The Little Match Girl;* and *Circe's Palace.*

It is no mean accomplishment for a boy or girl to become a good story-teller and thus bring joy and gladness into the home.

Another pastime for the social hour is singing. Most people like to sing. They sing when they are lonely, when they are at work, when they are happy. Perhaps the reason that more people do not sing while they work about the farm is because many of them, as children, were not encouraged to sing in the home. As a result, they know very few good songs.

Singing becomes easier where there is a piano or an organ, with someone to play it. Every home, if possible, should have one of these instruments. Either will bring more joy than a fine motor-boat or an automobile. But whether there is an instrument or not, there should be singing. Besides the individual joy that it gives, it brings the family into closer union and tightens the bonds of love and good fellowship.

The songs that first find a ready welcome in the

country home are the sacred songs used in worship. Among those best loved are *Nearer, My God, to Thee; Lead, Kindly Light; How Firm a Foundation; Hark, the Herald Angels Sing; Holy, Holy, Holy; Work for the Night is Coming; Jesus, Lover of My Soul;* and numerous others that may be found in any good hymn book.

But the songs should not all be sacred. There are many old Scottish songs whose melodies have charmed the world, and every boy and girl should know some of them. Among the most beautiful are *Flow Gently, Sweet Afton; Auld Lang Syne; My Heart's in the Highlands; The Hundred Pipers; My Heart is Sair for Somebody; Annie Laurie; Loch Lomond; My Ain Countrie;* and *Stormy Winter's Now Awa'.*

Some of the later popular songs that everyone would be pleased to know are *The Holy City, Nancy Lee, The Warrior Bold, Sing Me to Sleep, Bonnie Sweet Bessie, Juanita, The Perfect Day, Asleep in the Deep, If I Had a Thousand Lives,* and *Where the River Shannon Flows.*

The following are excellent for singing on picnics, moonlight boating trips, hay-rides, etc.:

In the Gloaming, On the Tombigbee River, The Quilting Party, Love's Old Sweet Song, Drink to Me Only with Thine Eyes, Polly-Wolly-Doodle, Stars of the Summer Night, Holy Night, Silent Night, Sweet and Low, A Negro Lullaby. To these should be added those wildly sweet melodies so well known in the South among both white people and negroes: *My Old Kentucky Home; S'wanee River; Old Black Joe; Massa's in de Cold, Cold Ground; Swing Low, Sweet Chariot; Were You There? Babylon*

is Fallen; Oh, Nobody Knows What Trouble I See; and *Nellie Was a Lady.*

No list of songs for country people would be complete without the names of some of the old ballads that are so popular among the hills and fields. *Barbara Allen; A Young Girl's Advice; Little Oma; A Cottage by the Sea; The Ship that Never Returned; Texas Ranger; The Drunkard's Dream; Oh, Bury Me Not in the Deep, Deep Sea; Pretty Mohea; Dog and Gun,* are some of them. They are sung to plaintive airs and are exceedingly popular in many sections of the country. All of these ballads and songs have long been the favorites of thousands of people. Many of the melodies are among the world's sweetest music. A large number of them have been transplanted from England, Scotland, and other European countries. They are sung in the southern mountains, and in practically all parts of the rural South, wherever the Scotch-Irish people have gone, and that is almost everywhere. They are the purest, the most natural kind of music, and should by all means be preserved.

Not every boy and girl has a good singing voice; but boys and girls, if able to sing at all, can in no way bring more pleasure to themselves and to the family than by learning good songs and singing them frequently while at work and play.

A third source of pleasure in the house is instrumental music. No child should ever grow into manhood or womanhood without learning to play some kind of musical instrument. Few things that the child can do will bring greater joy to himself and to his friends.

The organ, piano, flute, guitar, violin, banjo—almost any kind of instrument is suitable for the country home. If the family cannot afford an expensive instrument, it should get a cheap one.

A boy who lived on a farm in southern Tennessee learned to play tunes on a ten-cent whistle, then on a nineteen-cent fife, and later on a cheap flute. When he could afford it, he bought a good flute, a piccolo, and a cornet. He now entertains his family and friends with good music. And he never had a lesson on any of these instruments. A young lady reared in the southern mountains who never had a music teacher entertains her friends with wonderful music on the banjo, and plays the piano well. Another can give a good entertainment by singing old ballads and love songs, and playing the harmonica or French harp. In another community, the people used to enjoy the music and fun of a group of half a dozen boys and girls, who entertained their friends with a jews'-harp orchestra. Not one of these young persons ever had a music lesson; but their music was not so bad as many people would suppose.

Expensive music lessons are not always necessary in order that there may be an abundance of music for the home. Often, a child who is given an instrument may learn without assistance how to use it. If there is an opportunity for instruction, it is well that he should have it. If not, he may, nevertheless, learn to play fairly well.

If the family can afford a good instrument, although it is impossible to obtain for the children the training

necessary to enable them to play the best music, the player-organ, player-piano, or victrola may be secured. Any one of these will bring to the home choice selections from the greatest music of all times, and will acquaint the family with the work of the leading musical artists of the day. But after a child has learned to play an instrument well, he will find more joy in playing than in listening to any kind of mechanical music.

Other Kinds of Recreation for the Home.—Besides the forms of recreation already mentioned, there should be opportunities for many other kinds of fun about the home. A sand-pile should be provided for the youngest children. Swings, trapeze, horizontal bars, outdoor seats can easily be put at the disposal of the older boys and girls. One group of boys used to have great fun on rainy days, swinging on a trapeze, walking ropes, and "chinning" horizontal bars in the barn. Of course they fell occasionally and got hurt; but they learned how to do the trick better the next time.

Then, there are the social gatherings when friends and neighbors meet to talk over the affairs of the community, to sing, to tell stories, and play games. These gatherings should occur frequently, because they offer an opportunity for the young people to associate in a wholesome way. Moreover, they break down differences that grow up among neighbors who do not meet often to enjoy one another's company. It requires no small amount of tact and skill to plan and carry out social gatherings of this kind; and young people can learn how to do only by actually doing.

SUGGESTIONS

Tell about some of the musicales or other social gatherings that the people of your community enjoy.

Make suggestions about what can be done to bring more social life and care-free fun into the homes of the neighborhood.

QUESTIONS FOR DISCUSSION

1. What do the people of your community do to have a good time?
2. Speak in detail of the particular kinds of play and other forms of recreation enjoyed by—
   (*a*) the children,
   (*b*) the young men and women,
   (*c*) the old men and women,
   (*d*) the people in middle life.
3. What do the people play when they come together in groups?
4. Do they have more pleasures indoors or out of doors?
5. Is there much singing or instrumental music among the people?
6. Do the small children have sand-piles to play on? Did you have one when you were a child?
7. Is there a favorite picnic ground somewhere in the neighborhood?
8. Do you think that the recreation that the young people have is the best kind for them? Do the old people approve it?
9. Do the young men go to town for their fun, or do they find sufficient recreation at home and among their friends in the community?
10. Tell what you think could be done to afford more wholesome fun and recreation for both young and old.
11. Prepare a paper on "The Kind of Recreation I Had When I Was Very Small."
12. Discuss this topic: Why every child should have swings, sand-piles, jumping ropes, trapeze, bows and arrows, etc. for playthings.
13. Do any people in your community drink, gamble, play cards, or shoot "craps" for recreation?
14. Write a letter to some friend telling him about the kinds of playthings that he ought to provide for his children.

CHAPTER IX

Community Recreation

The Value of Community Play.—We have seen how important it is for boys and girls to play. It is equally important that the people of the whole community should meet occasionally for play and a better mutual understanding. Few things bind people together so closely as outdoor sports in which both young and old take part. Differences between families, petty quarrels of all sorts are forgotten during a time of wholesome fun on the playground.

In former days, it was customary for people to assemble in groups for recreation much more frequently than they do now. The occasion was often a "working" of some kind that afforded as much opportunity for play as for labor. Bean-stringings, apple-peelings, corn-shuckings, quiltings, and other gatherings of the kind brought out all the young people and many of the older ones. After a log-rolling or a house-raising many of the neighbors remained for supper, and a "frolic" that continued far into the night. Nearly every community had a special field where the men and boys were accustomed to gather occasionally for bull-pen, baseball, wrestling matches, marbles, and running and jumping contests. They tested each other's strength with hand-sticks, and indulged in various sports in

which strength and endurance were at a premium. Often, the women and children assembled with the men to take part in singing and dancing games.

The Play Spirit Disappearing.—But these community play days are too rapidly disappearing. The coming of the automobile in the open country has doomed the outdoor community playgrounds in many sections of the land. Instead of going to the field to play healthy games and watch others engage in friendly contests, the family enters its private car and takes a long drive which requires little or no physical exertion and which takes them entirely away from the social group at home. This, indeed, enlarges their knowledge of places and brings them, in a way, into touch with many more people; but it does not add to their neighborliness, and it does not cultivate that intimate social relation that means so much to people on adjoining farms.

It is true that the automobile enlarges the community. Whether it will bring more people into closer relations and foster the spirit of oneness in a larger group of neighbors remains to be seen. It is a question whether the breaking up of social gatherings will help or hinder neighborliness.

It is important that something be done to bring back this old community play spirit. In every community there will always be many people who do not have automobiles, and who can meet and play in the old-time way. Perhaps the play spirit, as it once existed, can never be brought back wholly; but something may be done to encourage people to unite in

furnishing entertainment at home, instead of going away in strictly family groups to seek it elsewhere. The present-day tendency is to attend picture shows and other places of amusement, where fun and recreation are prepared and sold like canned meats or breakfast foods. Little physical or mental exertion is necessary to procure this kind of pleasure; no planning is required. Instead of making their own fun, people prefer to pay the small price of admission to a place of entertainment, where they take what comes, be it good and wholesome, or grossly indecent. This consuming desire to get away from home for entertainment can be overcome, or at least modified, by simple, well-directed community play at home. Needless to say, there are still regions, especially among the untraveled mountains, where this unrest does not exist; but the desire to get away from home, to have thrills, and to purchase pleasures is spreading into the most remote places.

The Half-holiday.—Every farm boy and girl needs a half-holiday each week. The strenuous work in the fields, the house, and the barns, from Monday morning until Saturday night, is one of the most fruitful sources of discontent among those who live in the open country. A half-holiday is essential to both young and old. They need the wholesome fun and conversation that will furnish mental change, bring families closer together, and foster the spirit of coöperation in the community.

This half-holiday should be devoted to recreation. It should not be a time to mend harness, to grease

wagons, to salt the sheep, to have the horses and mules shod, or to do other odd jobs that accumulate on working days. It should be a time of freedom to rest or to play; of freedom to seek recreation without the responsibility of toil and care. If this half-holiday custom were adopted on the farms, we should probably see more spiritually minded congregations in the country churches on Sunday; and we should hear less talk among the people about a dead, dried-up community.

In a certain community in the southern mountains, the people usually meet on Saturday afternoons during the summer and autumn to play baseball and other active games. All work is laid aside; both young and old come out to visit with their neighbors, "root" for their neighbors' boys, and share in the general fun of the games. The young people of this community are much more contented than are the youth of many other localities where such opportunities are not given.

In another "live" section, a country church owns a large lot that is well suited for games of various kinds. The officers of the church invite the young people to assemble there every Saturday afternoon for ball games and other active sports. Scores of young men and boys, and sometimes many girls, from the farm homes for miles around, gather on this playground and enjoy the half-holiday during the summer season. They attend the church services on Sunday, and are deeply interested in the work of the church, because the church is interested in them.

A successful farmer of northern Mississippi, who had

several sons and employed a number of work hands, was asked once to tell how he kept his sons and his hired hands so well contented. He replied with a good deal of pride:

> Well, you see, I always give them plenty of good food to eat, furnish them good beds to sleep on, and give them a chance to have a good time. Whatever comforts I have, they have also. I let them ride my best horses to town, and drive in my two buggies to see their sweethearts. Every Saturday, when work is not too rushing, I give them a half-holiday. Of course I can't do this all the time; but the boys understand that and work all the harder, in order to get Saturday afternoon off next time.
>
> I always commend the boys when they do a good piece of work. You know I was in the war, and I always felt good when the colonel came round to commend us. I was then ready to die for him; but if he had scolded us about our mistakes, I am afraid I should not have shed many tears if he had been killed.
>
> My advice to everybody is to take good care of the farm hands and let them have a good time along with their work. Brag about what they do, even if it is not quite so good as you would like to have it, and they will work hard and stick to you.

A Community Playground.—A successful farmer provides a good place where his calves and colts may run and play, a lot for his pigs, and a field where his horses and mules may be turned out to wallow and take exercise. Is it not important that even greater care be taken to provide a good place where his boys

and girls may run and play and have a good time? Near the center of every community there should be a field, where the children may gather in groups for games and contests of all kinds.

In recent years, the people of the cities have grown wiser than the people of the country in regard to this matter. They have realized the great importance of playgrounds in the proper rearing of children, and have produced play places for hundreds of thousands of little people, who formerly had to find recreation in dangerous streets and undesirable back yards. Today, almost every city in the land has its playground commission and its play supervisors, who see that the children have the proper amount of recreation under the right kind of conditions.

Phila. Board of Recreation

A CITY SWIMMING POOL

Cities provide playgrounds with swimming pools and play apparatus for the children.

Here is what one teacher writes about playgrounds in the city.

> A few summers ago, with a small party of friends, I visited all the playgrounds and vacation schools in a western Massachusetts city and saw hundreds of chil-

dren enjoying the swings, slides, giant-strides, horizontal bars, wading pools, and other things provided for them by the city. There were children of all ages on the grounds. There were little tots, whose mothers were at work in the mills; girls with dolls; and boys of sixteen, who preferred baseball diamonds to the slides and teeters. Some were playing circle games; others were building block houses; and scores were splashing and wading in the swimming pools. A supervisor was on duty at every playground to see that there was no vulgar language, bad conduct, or objectionable play.

In the vacation schools there were tiny youngsters in the kindergartens learning songs, marches, and dancing games. There were other children learning to read and write; some learning to make garments, patch torn clothes, crochet, and do other fancy needle-

AN OPEN-AIR PLAY FESTIVAL

When the boys and girls of the whole community get together and get acquainted with each other.

> work. Others were making baskets, hammocks, swings, paper flowers, and other articles. At intervals they sang, marched, played folk games, and had a good time together. They all seemed to be perfectly happy. The one thing that struck me with such force was the fact that these children, while playing and having a good time, were really learning to do the various things that many of them would have to do in after life to make a living.

In many communities in the open country, where play is not supervised, boys frequently show a tendency to use vulgar language and to behave in a way that endangers the morals of the children. They repeatedly dispute and quarrel on the playground; they fight over contested points in the game; they are inclined, at times, to violate the rules of the game, taking every advantage of their opponents to win.

Behavior of this kind would be rare, if the community provided well-prepared playgrounds with someone to supervise the games and prevent dishonesty among the players. There are playgrounds where it is unsafe for girls to go, and where they will not go because of the vile language in use among the boys. A boy with any manliness will not want to conduct himself on the playground in a manner that will make it impossible for his sisters to play within hearing.

The Kind of Play for the Country Playground.—The play of the countryside should at all times be adapted to country purses and country people. It would be unwise to insist that many of the games and much of the apparatus provided for city children be provided

for young people in the country. It would be just as unwise to introduce among country boys and girls the forms of recreation most popular in colleges and universities. The play must be simple and interesting; and the apparatus employed must not involve the

ZIG-ZAG BALL IN THE OPEN AIR

The girls need the development that comes from outdoor play quite as much as the boys do.

expenditure of much money. Football has no place in the play program of the open country. Tennis, one of the finest of outdoor games, is beyond the means of the poorest children, but should be encouraged wherever the people can secure the necessary equipment. Even baseball becomes a financial burden at times, although

the burden is lightened by the larger number who engage in it. Whatever the play, it should not cost too much.

A good guide to the recreation of the people may be obtained by making a study of the games that they play. During the past few years, many games played by the children of the country have been collected. It has been found that the games which include running and call for other vigorous activity are by far the most popular. Such games as dare-base, fox and hound, wolf and sheep, hide-and-seek, dare-tag are widely known. Marbles, and quoits or pitching horseshoes are by far the most popular games where skill of hand is required. Many group games in slightly varying forms are played in different communities.

In all communities there are usually children who know a great many games. These children should be consulted and interested in the play for the people. By getting together all the games known to the people in the neighborhood, enough entertainment will be found to fill with joy many days on the playground. Those who attempt to make such collections are often surprised to discover that many children who never saw a book of games know and play as many as sixty or seventy-five.

SUGGESTIONS

Make a list of all games you know how to play. Tell how to play some of them.

In planning a day, or a half day, of play with the neighbors it will be found worth while to provide play

for everybody. Too frequently a group of boys who are interested in baseball want to consume all the time and use all the field for that game alone. This kind of petty selfishness is one of the faults that community play is intended to overcome. A good rule to follow is: *Have play for everybody, and get everybody to play.*

Running Games.—There are numerous races and other running games well adapted to the country playground. Here are some of them:

Bean-bag Races.—Select two captains, each of whom will choose two other players. The captains stand side by side eight or ten feet apart with their players behind them. At the feet of each captain make a circle about fifteen inches in diameter. Twenty feet in front of each captain make another circle and put a bean-bag in it. Put two other circles with one bean-bag in each forty feet away, and still two others sixty feet farther on.

The object of the game is to collect and redistribute the bags as quickly as possible. At the signal, each captain runs to his twenty-foot circle, picks up the bag, returns, and puts it in the first circle. Then the second and third bags are brought one at a time. Then each captain touches the hand of the player next behind him, who takes the bags, one at a time, and places them again in the circles where they were at first. These runners then touch the hands of the next players, who gather the bags into the first circles one at a time. The side doing this first wins the race.

There are many variations of this race. More captains with more players each may be chosen. Bean-

bags may be placed farther apart, or nearer together, and a larger number may be used. If bags are not available, apples, walnuts, bricks, potatoes, rocks, ears of corn, or cobs may be used.

Tag the Hand.—Two captains choose two, three, or a dozen players each, who stand in line behind them. The captains toe a starting line. Two other players stand facing the captains at a distance of twenty, forty, fifty feet, or even farther.

At the signal, each captain runs to the player in front, touches his hand, then returns and touches the hand of the player who stands next behind him. This player, after touching the hand of the person stationed in front, returns to touch the hand of the player next behind him. This continues until the last runner, having touched the hand of the man at the front, returns to the starting line. The side first completing the runs wins the race.

This race also may be played in many different forms. Instead of touching the hand of the player in front, the runners may run around him. Or a post, a tree, or a rock may be substituted for a boy or girl.

Relay Races.—Three players are chosen on each side. The two captains stand side by side at the starting line; fifty yards ahead of them stand two other players. At one hundred yards stand the last two; fifty yards ahead of these last players are two flags or handkerchiefs.

At the signal, the captains run and touch the hands of the players on the fifty-yard line, and remain on the line. The new runners hasten to touch the hands of

those on the one-hundred-yard line, and remain there. These new runners pick up the flags and, returning, give them to the runners stationed at the one-hundred-yard line. These in turn run and hand the flags to the captains, who hasten back to the starting point. The side whose captain reaches the line first wins the race.

There are many different variations of this relay

"ON THE MARK"

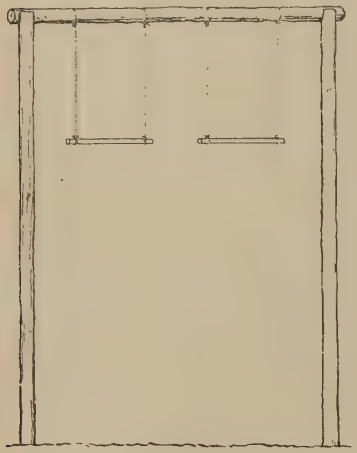
Boys who are not afraid to measure their strength against other boys will grow into men who are not afraid to measure their strength against other men.

race. If girls run instead of boys, the distances may be shortened.

Egg Race.—Two or more girls, each with an unbroken egg in a spoon, stand at the starting line. At the signal, all run to the goal line fifty yards away. The one reaching there first with the egg in the spoon wins.

The distance may be increased or shortened as the playground permits. Lighted candles may be substituted for the eggs and spoons.

Besides these games and races, there are scores of others, such as fox and hound, dare-base, bull-pen, hat-ball, leapfrog, hopscotch, tug-of-war, rope-jumping, quoits or horseshoes, jumping, baseball, well known to country children. If the school library contains a good book of plays, many others may be learned. One of the best books of this kind is *Games for the Playground, Home, School, and Gymnasium*, by Jessie H. Bancroft, published by the Macmillan Co., New York. If a book of games is not available, the necessary information may be secured, as already suggested, by making a list of all the games known to the people of the community. The best of these can be selected and used at the pleasure of the players.



A TRAPEZE

Made of locust or oak at a cost of about fifty cents. Part of the fun of outdoor sport consists in being able to rig up the apparatus needed.

Apparatus for the Playground.—Simple, inexpensive apparatus is the best for the playground. Only that which can be made by boys and girls with, perhaps, a little assistance from their fathers and mothers should be encouraged. Swings, giant-strides, horizontal bars, inclined ladders, trapeze, teeters or see-saws, tether-ball posts, poles for climbing, ropes or wire cables for

walking can be devised with little labor or expense. Most of these contrivances can be made from small poles and sticks cut in the woods. Anyone who can use an auger, a hand-saw, a hatchet, and a drawing knife can do the work. It is good recreation

MAKING A FIELD-DAY RECORD

Sometimes the neighborhood athletic competitions develop real athletes among the boys.

to make these things, and no boy who has any game spirit about him would hesitate to lend his assistance.

The Field Day.—No other athletic event is so well adapted to the open country as the field day. The numerous features that may be scheduled on the program afford an opportunity for everybody, from the youngest to the oldest, to take part. And that is the

kind of recreation that every community needs—play for everybody and everybody at play.

A field-day program, like any other community affair, requires a good leader. Someone must be on the ground to plan the day's happenings and to direct the players so that each event will run smoothly. Any young man or young woman with ability to manage people may conduct the activities; although it is probable that one who has had special training for the work would do it more successfully.

Field day is a regularly recurring event in many villages, schools, and rural communities. An observer writes of one such occasion:

> A few summers ago I witnessed a field-day program given under the auspices of four churches at Oberlin, Ohio. The director was a young photographer, who is a good athlete, and who takes pleasure in making opportunities for others to play. The people of the various churches came to the athletic field to see the fun, and to take part in the games. There were races of many kinds—the fifty-yard dash, the obstacle races, potato races, egg races, relay races, and other events. One of the funniest was a three-legged race in which the ministers of the town took part. Besides these, there were jumping and wrestling matches, tennis, volley ball, a sack race for the small boys, and various other stunts.
>
> The whole thing was marked by cordial good fellowship and fun. Ribbons were given to the winners, and banners were given to the church teams scoring the highest number of points. The events were witnessed by a large crowd of people who, I understood, always look forward to this annual occasion.

The following letter from a young lady in Kentucky tells how a field-day program was carried out in her school:

> We began talking about field day several weeks before it came off. The children became very much interested and even excited to see what it was like, for there had never been such an occasion in this com-

VOLLEY BALL

One of the organized games in which the children get a chance to open up their lungs and send the blood through their muscles.

> munity. Some wanted to have it the next day, but they were finally persuaded to have a little patience.
>
> One afternoon, I had a special meeting with the children to talk over details and organize the different groups. I was elected captain and a boy and a girl were chosen as assistants. I appointed a committee to arrange a program. Of course I was a member of that committee; but I made one of the boys chairman so that the children should have a real part in directing the plans for the day. The program which we made contained the following features:

1. Circle game—"Marching 'round the Levee"—everybody.
2. Fifty-yard dash for the boys.
   Fifty-yard dash for the girls.
3. One-hundred-yard dash for the boys.
   One-hundred-yard dash for the girls.
4. Marbles for the boys.
   Marbles for the girls.
5. Prisoner's base for everybody.
6. Broad jump for the boys.
   Broad jump for the girls.
7. High jump for the boys.
8. Rope-jumping contest for boys and girls.
9. Circle game—"Farmer's in the Dell"—everybody.
10. Potato races for both boys and girls.
11. Relay races for the boys.
    Relay races for the girls.
12. Pitching horseshoes for the boys.
    Pitching horseshoes for the girls.
13. Dancing game—"Skip-to-my-Lou"—everybody.
14. Sack race for the boys.
    Sack race for the girls.
15. Tug-of-war for the boys.
    Tug-of-war for the girls.
16. Circle game—"Oats, Peas, Beans"—everybody.

When Friday afternoon came, everything was ready. The children had talked about it so much that nearly all the parents and many other people came to see the fun. Most of them had never seen a field-day program, and they came to see what it was like.

We began the games at one o'clock and kept them up until four. Judges and group leaders had been chosen some days before, and it required all their attention to keep the children from playing everything at once. But we followed the program as I have given it, and awarded prizes made of blue and red paper.

When the children had finished their part, the fathers

and mothers had become so interested that they had to try their hand at many of the stunts. It was fun to see how awkward many of them were, the women especially.

Then we had a few circle games, in which most of the people took part, until it was time for everybody to go home. Everything went off well. The children were delighted and so was everyone else. I think I never saw people have a better time. They went away completely converted to the play idea by the first field-day exercise that the most of them had ever seen.

It would be a good idea for every community to have a play day something like this. It is not necessary to have expensive basket-ball or football in order to have a good time. Nor is it necessary always to have a baseball game in which only a few take part. The desirable feature in the field-day program is the fact that play for everybody is provided. If an old lady cannot run in a candle race, she can play in a circle game. If an old man cannot do the high jump, he can pitch horseshoes. The small children who cannot run in a hundred-yard dash can have relay races or bean-bag races of their own.

The chief object is to provide play for everybody and to see that everybody has a chance to play. It requires some skill to conduct such a program; but it is well worth while.

QUESTIONS FOR DISCUSSION

1. Do the boys of your neighborhood get together very often to play baseball and other games?

2. Is there much rough language used on the playground? Is there much disputing and quarreling?

3. Do the girls ever play in groups with the boys?

4. Are there any picnics during the summer? Who conducts them?

5. Are there ever any disturbances on these occasions?

6. What do you think could be done to bring all the people together oftener?

7. Collect all the games you can from the people of the neighborhood and write out the rules for playing them.

8. Talk with your grandfather or grandmother, or some other old person, and learn from them what games people played when they were young. Tell about some of these games.

9. Choose a committee of five among yourselves and work out plans for a field-day program.

10. Discuss these topics:

(*a*) How play makes better neighbors.

(*b*) Some things missed by people who never play.

(*c*) Why every home should have a sand box for small children.

(*d*) How play saves the doctor's bills.

(*e*) How play will make a good boy of a bad one.

11. Prepare a paper on "Why All Country Communities Need Public Playgrounds."

12. Make a talk on "How the Playground Keeps a Boy Out of Jail."

13. Write a letter to a farmer giving several reasons why he could afford to give an acre of ground to the community to be used for a public playground.

14. Plan an evening of games for old people.

15. Plan an evening of indoor games for young people.

16. Write a letter to a farmer giving several reasons why he ought to give a half-holiday each week to his boys and work-hands.

17. Discuss these topics:

(*a*) How the half-holiday keeps boys at home on Saturday night.

(*b*) The best way to use a half-holiday.

(*c*) How a playground will break up a bad picture show.

(*d*) Why girls need a half-holiday as well as boys.

18. Plan an evening of games for girls only.

19. Plan an afternoon of games for boys only.

20. Write a paper or prepare a speech on this topic: "Better Playgrounds and More Play Will Make Better Farmers."

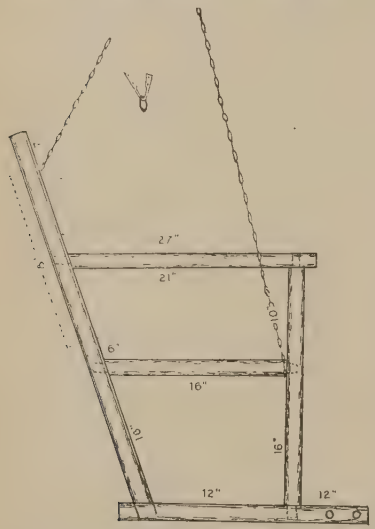
CHAPTER X

Household Arts in the Farm Home

Training the Hand.—Every boy should know how to use tools, and every girl should know how to use the crochet needle, the common needle, and the sewing machine. There are scores of things that skillful hands can make which bring more joy and satisfaction to the farm home than do similar articles purchased from the store. The art of making by hand has been gradually discarded in the countryside; but it is likely to be revived in the near future.

It is a part of every child's nature to construct—to make dolls, doll-beds, wagons, guns, and other playthings. This constructive instinct ought to be cultivated. As the hand becomes skillful in the use of tools, the brain is trained for the larger duties of life. Robert Fulton, Eli Whitney, Thomas Jefferson, George Washington, Henry Clay, Abraham Lincoln, Joel Chandler Harris, John Greenleaf Whittier are but a few of the noted men whose early lives were spent on the farm or in the small country village. The fact that so many boys from the farm, trained to do the thousand and one tasks that farm life demands of a boy, have succeeded beyond their competitors reared in the cities is strong evidence that the training of the hand means training of the brain. It is, too, an evidence that the necessity for making numerous petty decisions

concerning the day's work on the farm or in the workshop is a splendid preparation for the larger decisions that must be made later in life. Muscular strength, self-control, self-reliance, a sense of proportion and beauty, wholesome pride, and soul-power come from skill in the use of the hand.



A PORCH SWING

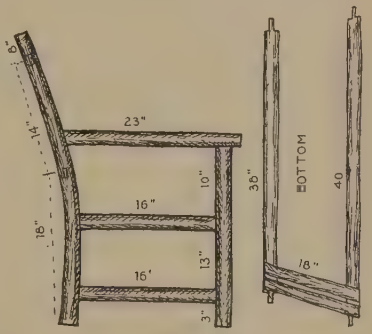
Can be made of sassafras, hickory, or oak saplings at a cost, not including the chains, of about two cents.

If possible, every country home should have a workshop supplied with a few simple tools, where the light repair work of the farm could be done, and where both boys and girls could become accustomed to the use of ordinary tools. In such a shop many valuable lessons can be learned, and many hours that would otherwise be wasted can be profitably spent.

Among our forefathers, it was the custom to make at home most of the furniture for the house and the implements for the farm. Beds, tables, chairs, buckets, picture frames, chests, plows, wagons—all were made by hand. Much time was required to do all this; but it must be remembered that there was much time in which to do this kind of work. After the crops were

made and harvested, many long days passed before the return of the crop season. These days were spent in making such things as the family needed. The father and sons constructed the furniture and other woodwork; the mother and daughters wove the cloth for clothes, quilts, spreads, and other household necessaries.

Many of these necessities may now be purchased at reasonable prices, with the result that many young people are unable to make any of the things that their forefathers took such delight in making. Instead of employing themselves in a work that is both interesting and profitable, they spend much time in idleness. And so they miss the great joy and satisfaction that come to one who has done an excellent piece of handiwork.



A RUSTIC CHAIR

Made of sassafras, hickory, or oak saplings. The materials cost about one cent.

The superior qualities of many hand-made articles commends them to everybody. A hand-made chair or table is often much more attractive and durable than one bought at the furniture store. A centerpiece that a young woman has made with her own hands, or a rug woven on her own loom is much more desirable than similar machine-made pieces. People who have expensive homes are always anxious to secure hand-

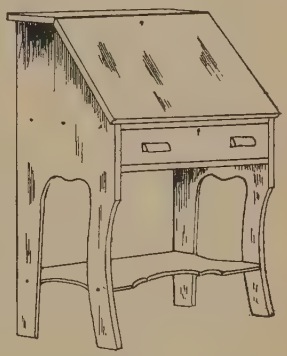
made furnishings and are willing to pay high prices for them.

There are many reasons why the home arts and crafts should be encouraged in every country home. We shall consider four of them. They should be cultivated, first, as a matter of economy; second, as a means of recreation; third, as a source of income; fourth, as a way to develop pride in doing things.

For Economy.—Furniture is very necessary in the home; yet, because of its constantly increasing cost, it is often difficult to procure. Household arts should be encouraged in order that many of the necessary household articles may be secured at low cost. It is a matter of regret that many of the fine old pieces of furniture so abundant in our forefathers' homes have disappeared. People have forgotten how to make them. Their places have been taken by factory-made articles that are said to be more sanitary and better looking, but that are, in reality, often very inferior in quality.

Now, these factory-made articles cost money. That money must be earned on the farm. A result of this custom of purchasing all the furnishings for the country home is just this: farming, in many sections of the country, is becoming almost exclusively a money-making business. Crops are made and sold to get money to purchase clothing, tables, chairs, dressers, wash-stands, taborets, express wagons and toy horses for the children—in fact everything that our forefathers made by hand. Every time the farmer hitches up his team or takes hold of his plow handles, he has in view

the dollars ahead that will be exchanged for many things which should be produced at the farm home. Instead of taking out his tools and making a rocking chair, he will sell a few bushels of wheat and buy one. He may say that he has not time to make such things. It is quite likely, however, that he has as much time to make a chair, as he has to make the money that it takes to buy the chair. And he would probably make a better chair than he would buy.



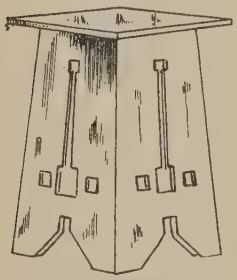
A WRITING DESK

The spare time on a farm can be spent with profit in the farm shop making furniture for the boy's own room.

A Workshop in the Barn.—There is much leisure time on most farms that could be industriously employed in occupations that would provide comforts for the home. Furniture is by no means the only possible product of this industry; it is, however, one of the most important, and it is one of the easiest. A corner of the barn may be fitted up as a workshop and equipped with tools, at the cost of one good shoat or a couple of lambs. Comparatively, very few tools are really necessary. A hand-saw for cross-cutting and another for ripping, two planes, a try-square, a brace and set of bits, two or three chisels, a vise screw, a screw-driver, and a light hatchet are essential. Of course, a farmer may buy as many tools as he desires; but if he does any woodwork at all, he must have these.

He can make a workbench and a vise, if he prefers, and so cut down expenses on them.

The cuts shown in this chapter are examples of what any boy or man who has had a little experience in the use of tools can do. It is surprising how little such pieces cost when they are made at home. A chair that will cost three dollars at the furniture store can be made for seventy-five cents. A walnut rocker that would sell for fifteen dollars on the market can be made for a dollar and a half. A dressing table that a young lady will have to pay twelve dollars for can be made in the home workshop for two dollars. A library table that would cost the price of a good calf, if purchased at the furniture store, would cost only about three dollars if hand-made. A hand-loom that a mother would have to pay twenty-five dollars for on the market would cost less than five dollars, if made in the home shop. For two dollars can be made a bookcase which, if purchased in sections, would cost twenty dollars. That would leave eighteen dollars with which to buy books to help fill it.



A TABORET

A neatly designed piece of furniture such as the boys can make in the home shop.

Many Articles Made at Little Cost.—Furniture, moreover, is not the only thing that can be made at greatly reduced cost. Baskets, brass and copper articles, leather goods of various kinds, rugs, hammocks, outdoor seats, and rustic articles of almost every kind

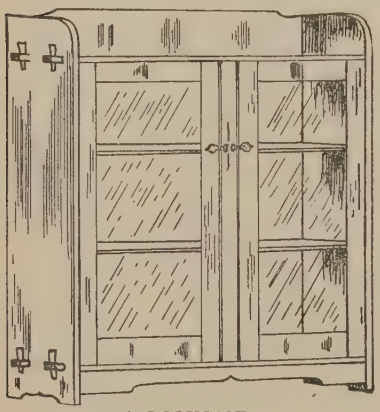
may be made with little experience and little expense. At a cost of less than one dollar, one boy made a brass lantern which would have sold for ten dollars on the market. For a few cents, another makes hickory chairs that sell for dollars on the city market.

A small hand-loom is not only a means of cutting down expenses, but is also a source of constant pleasure. Hand-bags that would cost $1.50 in a special arts store may be woven at a cost of ten or fifteen cents. Rugs that cost dollars when purchased may be made for a few cents. Table spreads, centerpieces, window curtains, portières that would be exceedingly expensive if purchased at special sales or at arts and crafts stores may be woven at very small cost. Materials for suits and other clothing may also be made at insignificant cost. And the fact that all these things are hand-made would increase their cost, if bought from dealers. Old-fashioned spreads for beds, couches, settees, etc., made with the designs that our grandmothers used to employ, cost from a few dollars each up to fifty dollars and more. They can be woven on the hand-loom at surprisingly little expense.

Baskets of raffia and reeds, of willow switches and oak splits can be made for very small amounts, in the country home, by anyone who has the skill and who takes the time to make them. At scarcely greater expense, one may have various designs of rustic chairs, seats, tables, swings made of hickory or sassafras poles, willows, oak splits, or hickory bark. In fact, one man found it necessary to spend only five cents for nails, in order to make two old-hickory porch seats that lasted

for six years. If he had bought them at a furniture store, the cost would not have been less than eight or ten dollars.

Materials Easily Obtained.—Country boys and girls have close at hand an abundance of material for making many of the articles that have been mentioned. In many sections, willows, which make the most durable and beautiful outdoor furniture, are abundant. The willow usually grows along a stream. As soon as the shrubs grow large enough to shade the ground where crops are planted, the farmer cuts them down; or, in August, he peels the bark from their trunks, in order to kill them. Basket-oaks and hickory trees abound in many parts of the land. From them can be cut splits and bark that may be woven into the most beautiful and expensive baskets, chairs, and other furniture. Material for making hand-looms also is plentiful and can be secured for almost nothing.



A BOOKCASE

As the boys become more skillful they can make themselves furniture like this.

Leisure Time Profitably Employed.—In obtaining all these home-made articles at low cost, the time required for construction has not been reckoned,

There are numerous rainy days and other unoccupied times when the hours hang heavy on the hands of thousands of boys and girls in the farm homes. Many of these days are spent in idleness. The time is, in a large measure, wasted. Much of it could be profitably spent in fashioning for the home numerous articles which cannot be purchased without considerable expense.

Here is a statement of what one man saved by spending hours in his workshop by way of recreation. He finds the results of his industry extremely useful in his home.

Article.	Market Price.	Actual Cost.
1 hand-loom	$25.00	$5.00
1 flat-top desk	20.00	4.50
1 filing cabinet	15.00	2.40
2 walnut rocking chairs	30.00	2.50
1 settee with rockers	12.00	2.24
1 dressing table	12.50	2.20
1 grandfather clock	50.00	4.60
1 copper lantern	10.00	1.00
1 antique lantern	15.00	0.65

Just a little figuring will show how much this man saved on these articles, by making them instead of buying them. Few tools in addition to those mentioned above were used; and much of the work was done on bad days, when time was hanging heavily on his hands.

A Means of Recreation.—Household arts should be encouraged as a means of recreation. Boys and girls and men and women must have physical exercise. One of the best kinds of exercise is found in the garden. But people cannot find pleasure and recreation in

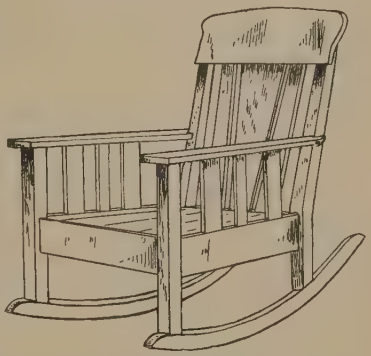
the garden in bad weather. A splendid substitute for the garden and orchard is the workshop. It is especially good for farm boys and girls. It not only furnishes plenty of fun, but it often furnishes the opportunity for a boy to learn a good trade.

One day, a skilled wood workman, who had never had a lesson in the use of tools, was asked to tell how he got started in the work. He told the following story:

> When I was a small boy, I used to get great fun from playing in a neighbor's workshop. The big workbench, the saws, the chisels, planes, brace and bits were wonderfully interesting to me. I wanted to drive up all the nails, bore holes in wrong places, and use the planes on boards filled with nails. I would sit or stand for hours, listening to the growl of the hand-saw, as it cut through material for swingletrees, chicken-coops, or farm gates. I never got tired of watching the shavings roll up through the plane as the man's strong arm pushed it along. Each time I did this, I resolved that when I became older and had money of my own I would buy tools and have a workshop and make things.
>
> My father had a number of tools; but I was never allowed to use them. I think that my father would not have cared; but my mother was afraid that I would spoil the tool, or that the tool would injure me.
>
> My father used to take me occasionally to a planing mill in the town to see the work going on there. I was always fascinated with the many different kinds of work. The thing that interested me most, however, was the man at the turning lathe. I never grew tired

of watching him, as he shaped the piece of timber with the gouges, while the shavings covered the bench and filled his beard. On these trips a desire to turn something became a sort of passion; and I was never satisfied until I stood beside an electric-driven lathe with gouges keen and sharp, and made things with my own hands.

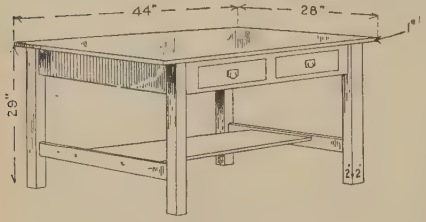
When I became old enough, I had to work in the fields. Nevertheless, I found much time to play at making things. I had an iron bolt, which represented a man for whom I made all sorts of things. A cousin taught me how to make a "flutter-mill," and I found great joy in making others like it. My father taught me how to make windmills from dry cornstalks, and this furnished no end of pleasure. Later, when I was allowed to use my father's tools, I made boxes, chicken-coops, wagons, sleds, guns, pistols, and numerous other articles that brought me great joy, though they often brought grief to other members of the family. On rainy days, I worked in the barn; and when it was cold, I sometimes finished small articles by the fireside. My mother did not object to this, except when I let shavings fall on the jar containing the milk placed there to "turn."



A ROCKING CHAIR

This chair would cost at least $16 in the store and can be made in the home shop for $1.50.

By and by, when I had made some money, I bought a few tools of my own and made other things useful for the home. My first piece of furniture was a writing desk with shelves on it to contain the "nest-egg" of my library—Scott's *Marmion* and Stanley's *Travels in Africa*. All these things gave me much pleasure. My mother always said they kept me out of worse mischief; and I think now that she was right.



A LIBRARY TABLE

A piece of furniture that can be made in the home shop at about one-tenth of the cost of a similar table bought at a store.

So my interest in the use of tools grew. When I became a man, I discovered that I could make things that pleased other people. So I bought a set of good tools, to which I added others as I needed them; and I have for many years made a good living working with my hands.

A friend asked him if he enjoys the work now as much as he did when he used to make "flutter-mills."

Yes, he replied, it does me just as much good to get a plane in my hand now, as it did when I used to get father's out and spoil it on a nail. Working with tools is always a great pleasure to me; and I am never happier than when making a good library table or a walnut chair. It isn't work, it's fun.

Many professional men such as doctors and lawyers, who find it necessary to remain indoors much of their time, have workshops connected with their homes. In constructive manual work they find the rest and

recreation that their minds and bodies must have. Like the skilled workman just mentioned, they look upon such pastime not as work, but as fun.

A Source of Income.—People over all the world find the manual arts a constant source of income. The wood-carvers of the Alps, the toy-makers of Japan, the makers of baskets and blankets among the American Indians, the weavers of old-fashioned coverlets in the southern mountains, and many classes of people elsewhere make a living with patience, skill, and a few simple tools. In some parts of the South, especially in the mountains, men in middle life and in old age derive constant incomes from the weaving of baskets out of oak splits. Here is a source of income for thousands of people on the farms, who have the patience to learn the art and the energy to do the work. There are other people who earn considerable money every year by making rustic chairs, seats, swings, and similar articles that people want and are willing to pay for. A woman in Kentucky fashions doilies, centerpieces, and numerous articles which she sells in many different states. In this way she makes her own living and pays the way of her children in school. Other women here and elsewhere obtain good incomes by weaving spreads, blankets, and material for clothing. They sell their products to people living near them, or send them away to be sold in distant cities.

The demand for simple hand-made furniture and needlework is growing. The old bureaus and coverlets that our grandparents made are highly prized and much sought for. People have either forgotten how to

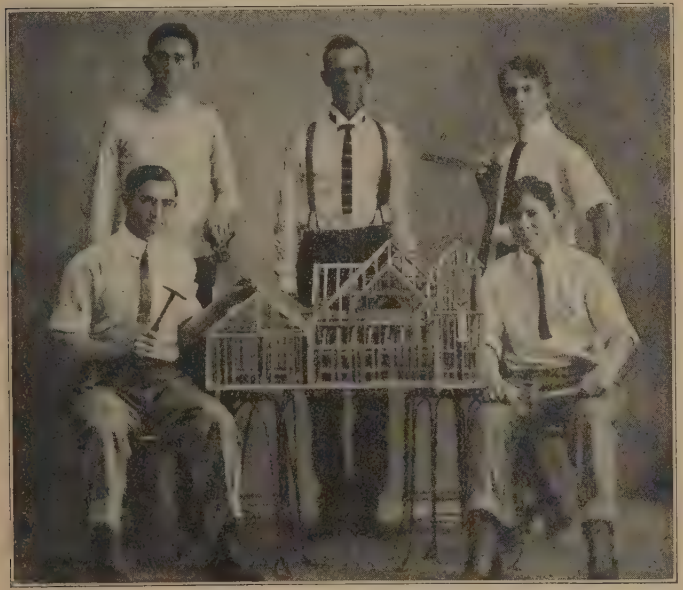
make them, or do not wish to take the time to do so. They are willing, however, to pay high prices to obtain them. Many boys would do well to equip shops and learn such craftsmanship; and many a girl might profitably employ her needle in such handiwork.

In many places remote from railroads, timber is abundant. In such out-of-the-way localities, where much time is spent in idleness, men and boys could easily make their own furniture and supply their neighbors, as well. Frequently, they could find all the timber they need on their own farms.

But the man who owns timber does not often use it to construct his own furniture; nor does he make furniture for his neighbors. He cuts down the trees and floats the logs many miles to a mill, where they are sawed into lumber. The lumber is then shipped to some furniture-making center, where it is made into tables, dressers, chairs, swings, taborets, sideboards, etc. Then the furniture is shipped back to the station nearest the man's country home; is hauled from there in freight wagons, over roads that are often bad, to the country store; and is sold to the man at a high price. Now, the man who floats the logs, the saw-mill man, the manufacturer, the wholesale dealer, the railroads, the freight teamster, and the retail merchant must all make a profit on these articles. And the farmer, who once owned the trees from which the articles were made, must pay the profits. That is why he must pay fourteen dollars for a table that he could make for two dollars. If someone is going to pay a good price for the table, would it not be possible for

the man who owned the tree to make it and get the good price?

To Develop Pride in Doing Things.—All over the land there are thousands of people who are incon-



A CLASS IN WOOD WORK

The boys who can make such things as this model of a country church will in the years to come be very useful citizens of the community.

venienced or injured by gates that drag the ground, axes that won't stay on the handles, swingletrees that lose their hooks, center-tables that topple over, and dresser drawers that stick on damp days. One man uses a pick or a mattock that slips on the handle and bruises his hand; another cuts weeds with a hoe whose

handle cuts his hands or fills them with splinters. Much time and temper are lost by people who use tools that are poorly made. A board is used for a boat paddle; a chain instead of a latch is put on a gate; a rough stick is used for the handle of a pitchfork or a sledge-hammer; a few loose planks are thrown into the barn loft as a floor. Barn doors often have no hinges; and sometimes old barns are seen tottering, as though just ready to fall.

People cannot take pride in such things. They miss the joy that comes from pointing with satisfaction to a good piece of handwork and of telling a neighbor about it, or of having a neighbor see it and commend it. There is something in a good piece of work that makes people feel glad; but a poor piece of work never makes anybody happy.

One day, when a group of men and women were talking about just such things, one of them said:

> I have seen thousands of articles made by boys and girls in school and about the home. I have never heard one of these boys or girls tell of a good piece of work who did not take great pride in doing so. On the other hand, I have seen thousands of articles, such as hoe handles, farm gates, barndoors, pigpens, etc. that were wretchedly made or only half made; and I have never heard anybody who made one of these things brag about it. The farmer who had such things about his house either swore about them, or he felt too much ashamed about them to mention them.

It is a source of great satisfaction to make a chair or a settee, a table or a grandfather's clock that will out-

last a generation. The mere fact that a man makes something neat and useful will give him and his friends pleasure; but when he makes a piece of furniture, or weaves a rug or spread that will be handed down as an heirloom for generations, he will reap a great joy himself, and will give a great joy to many other people. There is never any joy in things poorly made; there are both joy and pride in things well done.

QUESTIONS FOR DISCUSSION

1. Mention some household articles that are made by the men of your community; some that are made by the women.
2. Suppose more work of this kind were done by the people; how would it help them?
3. Why do you think that more of it is not done?
4. Are many of the farm implements made by the men?
5. Do you think that it is cheaper to make household articles or to buy them? Why?
6. Do many people have much leisure time which they spend in idleness? How do you think they could employ this time to advantage?
7. Which do you think would be more profitable: to work by the day to get money to buy tables, chairs, picture frames, coverlets, etc., or to buy a few tools and other equipment and make them?
8. Write a letter to some friend and tell him several things to convince him that it is cheaper to make household articles than to buy them.
9. Why does a boy or a girl feel happy over a piece of good work? Why does no one feel happy over poor work?
10. Tell about some hand-made articles that you have seen which were made by people long ago. Why do people take such interest in these things?
11. Do you suppose that you could make a chair that would last for a hundred years? What tools would you need? What kind of material would you select?
12. Are there any skilled workmen in your neighborhood? What do they make? Do they take pride in their work?
13. Tell about some simple things that a boy can make. Tell about the tools he will need and the kind of material he will use.

14. Tell about some things that a girl can make. What tools will she need, and what kind of materials will she use?

15. Prepare a paper of two hundred words telling about some articles a boy or a girl can make, and give instructions for making some of them.

16. What would you think of a school fair where boys and girls can show all the various articles they might make during the school year? How would that encourage other people to do some of the same kind of work?

17. If you have ever seen such an exhibit, tell about it. If you have not seen such an exhibit, suppose you talk over plans for one of that kind. Plan the shelves, the tags, the arrangement of the whole exhibit. How would you get the people there, and what would you tell them after they had come?

18. Write to a friend and tell him how he may have more money to buy books, pictures, musical instruments, etc., if he will make his chairs and tables instead of buying them.

19. Discuss these questions:

(*a*) Why every boy ought to know how to make chairs.

(*b*) Why do people not make more things for themselves?

(*c*) It is cheaper to make a table than to sell corn and buy it.

20. Write the story a hand-made chair told.

21. Suggest plans for a home workshop.

22. The following list suggests some things that may be made:

(*a*) A hand-loom. On this may be made rugs, curtains, table spreads, bags, blankets, coverlets; dress goods of cotton, silk, linen, other fabrics; cloth for men's suits and numerous other articles.

(*b*) All sorts of doilies, centerpieces, drawn work, crochet work of every kind, caps, gloves, stockings, sweaters, hammocks, bags, etc.

(*c*) Leather work, such as pillow covers, pads for chairs, belts, harness, bags, general upholstery, etc.

(*d*) Articles of beaten copper, brass, german silver, etc. These include lamp-shades, antique lamps, jardinières, match-holders, lamp-stands, writing-pads, book-marks, old-fashioned lanterns, etc.

(*e*) Baskets of oak splits, hickory bark, willows, raffia, reeds, grasses, rushes, pine needles, etc.

(*f*) Flower-boxes, seed-boxes, testing-boxes, chicken-coops, doll-beds, baby-beds and cradles, wagons, sleds, etc.

(*g*) Vases, jardinières, bowls, urns, all sorts of earthenware products from fire-clay.

(*h*) Tables, chairs, desks, settees, sideboards, cabinets, dressers, wardrobes, chiffoniers, dressing tables, bookcases, grandfather clocks, candlesticks, etc., from walnut, oak, maple, chestnut, and other hard woods.

(*i*) Chests, urns, candlesticks, jewelry-boxes, fancy bookcases, bowls, other articles from cedar, walnut, and cherry.

(*j*) Rustic chairs, seats, swings, tables, cots, flower-stands, summer houses, arches, outdoor beds from sassafras, oak, willow, laurel, or hickory poles.

(*k*) Mats of shucks, straw, reeds, and other materials.

CHAPTER XI

Roads and Transportation

Importance of Good Roads.—The condition of the roads is a good index to the prosperity of a community. The people of a locality are, to a great degree, dependent on them for markets for farm produce, for the necessities in the home, for good farm implements, for the exchange of grains, fruits, and stock among themselves. Every farmer who goes to market or to mill, who hauls logs, cross-ties, tanbark, crushed limestone, brick, cement, potatoes—anything that he has to sell, or that he needs for building a house, a fence, or a barn—must travel the roads in some kind of vehicle. If the road is good and the weather fine, he makes the necessary trip in a very short time. He saves his team, his wagon and harness, his time, and money. He reaches the market with his produce in good condition, sells it at a good price, and returns home with his furniture unscarred and his tableware unbroken.

How Bad Roads Cause Loss.—But if the road is bad, he loses much time in getting around mud-holes and pulling out of ruts. Parts of his wagon are jostled loose or perhaps lost. His team is tired out and his harness may be broken. He reaches the market with apples and peaches crushed, with potatoes badly skinned and bruised, and is forced to sell at a reduced

CAUGHT IN THE MUD!

A place where time, patience, and money are lost. Such a road is almost worse than none at all.

price. Or, he is so delayed by the bad road that the other farmer beats him to market and supplies the demand for fruits and vegetables.

If he starts with a heavy load of lumber, wheat, or cross-ties, he will in all probability get stuck in a mudhole or stalled on a steep hill. Here he will lose time and patience, will beat his team, swear, and abuse the road overseer, the county court, and the community in general because the roads are not kept in better condition.

If he buys a sack of flour, a center-table, or a bowl and pitcher, he often discovers when he returns home from market that the sack is torn and part of the flour lost, or that the table is scratched, or the pitcher broken. He is then little inclined to talk about farm improvement, or to make plans for consolidating the school or raising money for the preacher's salary.

Bad Roads a Cause of Discouragement.—If forced to undergo such experiences week in and week out during several seasons, he becomes discouraged at the loss of time, money, and material, and finally accepts in discontented fashion the unfavorable circumstances of which he is the victim. He imagines that fortune in general and bad roads in particular are against him. He repeatedly says to himself, or to his wife and children:

"What's the use of raising produce for the market? Why try to have neat and convenient furnishings for the home? If we have a big crop of fruit, it is spoiled while being hauled to town and must be sold for less than it costs to gather and market it? If I buy things

for the home, they are often ruined before I can get them here. I do not see that it pays to attempt to make more than just enough to live on."

Now, he has good reason to be discouraged; as have his wife and children. Plans for a larger crop that would bring more money, pay for a better house,

A BAD STRETCH OF ROAD
If the farmers can have no better road than this, certainly the price of food will rise.

put in it a water system and other conveniences, and furnish it with good furniture, such as a piano, good tables, chairs, etc., must be given up. When the sacrifice is made, the whole family settles down to make the best of a bad situation and to quarrel occasionally with the neighbors, just because a bad road stretches between them and prosperity and happiness.

How Bad Roads Affect All the Community.—Nor

are the one farmer and his family the only people affected by the bad conditions. Everyone in the community is more or less dependent on the same road. If each farmer who travels it loses five dollars on a load of apples bruised by hauling, and has to pay two dollars to have a broken wagon repaired, fifty farmers who grow apples for the market and who may be obliged to transport their produce over the same way would lose $250, and would have to pay out $100 for repairs. That amount of money would mean a good deal to some communities. The $250 would pay the first instalment on a new threshing machine; and the $100 would purchase cream separators for three or four families.

Again, if it takes the whole day to make a trip to market which could be made on a good road in half a day, it is easy to figure out what the community must pay for frequently killing half a day throughout the year.

Then, there is the cost involved in replacing wagons, harness, teams, and other equipment worn out by the bad roads. Where the roads are bad, a wagon and harness will last from two to three years. Where they are good, they will last ten years or more. Ascertain the cost of a wagon and harness, and then figure out what the farmers in the community would save on wagons and harness alone, by keeping the roads in good repair.

How Roads Affect the Price of Land.—A good road through a farm or near it will affect very materially the market value of the land. One of the first questions

that a prospective buyer would ask concerning a farm would be, "Is this farm on or near a good road?" If it is, he will pay from ten dollars to twenty-five dollars per acre more than he would if there were no good road near it.

QUESTIONS

How much could a farmer who owns 300 acres a mile from the pike afford to pay to make a good outlet for his produce, and still come out ahead? How much would he be likely to pay without grumbling? Which would be the better economy—for a farmer to build a good road on his farm, or to hunt for another farm near a good road?

Should All the People Join in Road-making?—We have said that a good road built through a community increases the value of the land bordering on it. Let us suppose that this increase will amount to five dollars an acre on all the land on both sides of the road. Figure out the increase in the value of the land along one mile of the road. What would it be along ten miles?

Suppose the road were built across the entire county. Would it pay the whole county, as well as the farmers who own the land, if the county were to furnish the money to build it? Why is it that the farmers in all communities do not insist that good roads be built near their farms?

Prices Determined by Bad Roads.—Thus far we have talked about the loss of money and time. This money loss amounts to a large sum for a whole community during the year. Injured fruits and vegetables must be sold cheaper; calico, flour, coffee, kerosene, sugar, and other staples, when hauled by wagon or

motor truck to country stores, must be sold for higher prices. In some localities it costs from fifty cents to seventy-five cents a hundred pounds to have bacon, flour, feed, clothing, and other supplies transferred from the freight station to the country stores. Every-

A STREAM IN THE ROAD
If the proper side ditches had been planned this would be a better road.

one who buys from the country store must help to pay the freight on what is brought in. He does so by paying a higher price for each article purchased. Every pound of bacon, every gallon of kerosene, every yard of cloth, every sack of flour or can of peaches that goes from a country store into a country home must go at a price sufficient to cover the original cost, plus the rail-

way freight, plus the wagoner's freight, plus the retail merchant's profit. As a result of this, thousands of people have lost millions of dollars because they have had to pay the additional cost of bad roads. Finally, the country merchants lose money, because the people

AN IMPASSABLE ROAD

In some parts of the country the roads are placed along the creeks—which is all right until it rains.

turn away from the country store and its high prices to the big mail-order houses, where they can get what they want at a much lower price, although they may have to pay freight or postage. But the money loss is not the only loss involved.

Bad Roads and the Schools.—Bad roads seriously interfere with the attendance at country and village

schools. In the autumn when there is little rain, the roads may be in fairly good condition; but in many parts of the country they frequently become so bad when winter rains set in that small children cannot travel to and from school. Creeks often fill the roads; or huge mud-holes add to the difficulties of travel.

In a study of educational conditions in a southern county, it was discovered that over two-thirds of the teachers reported that bad roads are in a large measure responsible for irregular attendance. There are some counties in the southern mountains where bad roads keep fully half the children from school during many days of the school term.

Wherever practicable, it is always advisable to consolidate the one-room schools into larger schools, centrally located. Where such a system exists, better buildings may be erected. Moreover, the children from all the country for several miles around may have access to better school equipment and may have better trained teachers. But such a plan is impossible in a locality where the roads are bad. The wagons and automobiles that carry the children to and from school cannot run on time. The people cannot reach such a school building for the lectures, the musical programs, the farmers' demonstration meetings, and the social events that the consolidated school would make possible. Thus the education of the entire community suffers.

QUESTION

Why is it bad economy for the children to be kept out of school on account of bad roads?

Religious Work Affected by Bad Roads.—How many people would enjoy the Sunday-school lesson or the sermon, if they had to walk two or three miles over bad roads to get to the church? Yet there are tens of thousands of people, both young and old, who must do this very thing. Moreover, on very bad days they cannot go to church or to Sunday-school at all. Many communities, therefore, attempt to have Sunday-school for only a few months during the year, because the roads are too bad in winter and spring for the people to attend.

From the standpoint of economy and efficiency it is just as desirable to centralize religious work as it is that of the schools. Successful church work depends very largely on the endeavors of little groups of people who meet to make plans for helping the poor, visiting the sick, managing the church socials, and performing other important services for the people. When it is difficult for these little groups to meet, the work will go badly. Since some will be absent who should be present, enthusiasm will run low, and plans for efficient community service through the church will be seriously interfered with.

QUESTIONS

If boys and girls do not come into touch with any kind of religious activities during six or eight months of each year, what is the effect on them?

Should not all church-going people see that the roads leading to their churches are kept in good repair? Would it not be a wise thing for the church as a body to encourage a movement in the community for better roads?

Other Community Interests Affected.—Nor do the bad roads affect the schools and the churches only. The grange, the farmers' union, the farmers' institute, the teachers' association, and other gatherings for social and educational purposes are seriously interfered with. The people fail to attend because travel is difficult. Many who would otherwise support such meetings, and gain inspiration to be better farmers or better teachers, or to live larger lives, remain at home and do the same old things in the same old way just because the road is bad and the team is too tired to travel it.

DIFFICULT WORK FOR THE RURAL MAIL CARRIER

The government has sometimes been forced to discontinue rural mail routes if the roads were too bad.

The distribution of mail by the rural carriers also is interfered with. Indeed, in many places free rural delivery routes cannot be established because the roads are so poor that the carrier could not possibly make the rounds on time. In other places, where delivery is attempted, the mails are frequently delayed for days because the carrier's wagon cannot make the trip

over bad roads. More than that, owing to the long delays, people can make but little use of the parcel post. Nor can they keep in close touch with the outside world through the daily papers. They must of necessity live apart from the rest of the great world of people and from history-making events. They can never be so intelligent in matters of government as citizens of a free nation should be. And where ignorance reigns, a government by the people is always in danger of great abuses.

Finally, the wholesome social life of the people suffers. Both young and old like to meet occasionally on purely social occasions, such as the Sunday-school picnic, the church social, the party, or the grange rally. Bad roads keep at home the very people who are in most need of social intercourse. They also make life dull for many who would otherwise be happy in their association with their neighbors.

Thus it may be seen that bad roads restrict almost every kind of activity in the community. The social life, the school, the home, the church, farming, and marketing—all must suffer. Why is it that people do not realize this? Would it be wise to set certain days for all the community to turn out and work the road together?

QUESTION

From the standpoint of intelligent voting, would it not be well for the people to have good roads, in order that news from the outside world may come to them more easily? Voters need this news before election day comes.

Give a three-minute talk on the disadvantages of bad roads.

QUESTIONS FOR DISCUSSION

1. Study and report on the condition of roads in your community. Are they rocky, cut up with ruts, sideling?

2. Draw a map of the community indicating the roads.

3. Indicate on the map which roads are made of dirt, rocks, sand, gravel.

4. Mark those that are well graded; those that are well surfaced.

5. Note the side ditches. Are they adequate?

6. Note culverts and bridges, the materials and the conditions.

7. Estimate the miles of road in the community, public and private.

8. Study road-making material in the community. Note places where limestone, slate, gravel, and sandstone are found.

9. Which material is the best for road-making? Is it accessible?

10. Find out the cost of hauling in the community? Consult wagoners and learn charges per hundred pounds for freight and farm produce.

11. Can farmers afford to market produce at present cost of cartage?

12. Find out how much freight is hauled into the community annually, and compute the amount paid for the hauling.

13. How long will a wagon and a set of harness last on bad roads? How long will they last on good roads? What is the difference in cost in ten years?

14. How much could people who buy supplies afford to spend on road upkeep each year in order to cut down freight rates?

15. Find out what it costs to haul a ton one mile on the roads in your community. Compare this cost with that on the roads of France and Germany, where the cost is about eight cents.

16. Can you find out from an engineer what it costs to build a mile of good road and keep it up for ten years? What would the road cost between your home and the railroad station?

17. How do bad roads raise the cost of living in the country?

18. Tell what you can about how bad roads affect these people:

Farmers.	Truck-gardeners.
The heads of families.	Teamsters.
Teachers.	Merchants.
Preachers.	Carpenters.

19. How do they affect the grange, the church, the school?

CHAPTER XII

Road Improvement

Good Roads a Source of Pride.—Good roads are at once a necessity and a source of pride to a community.

ROAD-MAKING
At work on the "Dixie Highway." Forming the roadbed.

When people travel on a good road that they have helped to make, they enjoy a satisfaction and feel a delight that they can experience from no other travel. They like to talk about their fine road as much as they

like to talk about a new schoolhouse, a beautiful church, or an artistic bridge. If the roads are bad, they feel ashamed of them and avoid the subject of roads, when enumerating the attractions the community has to offer to the prospective land purchaser or the promoter of new business.

When travelers from a distance pass overland through a region new to them, they at once express opinions about the roads and the people who made them. If the roads are good, the travelers speak well of them, and conclude that a prosperous and progressive people live in the vicinity. If the roads are bad, they are almost certain to condemn the locality, and are likely to call the people shiftless, unprogressive, and poverty-stricken.

A Source of Pride to States and Nations.—The people of ancient Egypt, Persia, and Babylonia were great road-builders and took especial pride in their highways. So did the people of the great Roman Empire. The last built roads for military as well as for commercial purposes, and so bound all the best parts of their vast domain together. Some of these famous highways built in Italy, France, England, and elsewhere were so well constructed that they are still in use. The old Appian Way, one of the famous roads leading out from the city of Rome, is used at the present time. Much of the material of the foundation is the same today as when the Apostle Paul traveled over it nearly 2,000 years ago. The lines of march of some of the great Russian, Turkish, and English armies, in the countries east of the Mediterranean Sea during

the great European War, have been along routes laid out and improved for military purposes before the birth of Christ.

England, France, Germany, Switzerland, and other much-visited European countries have long had roads to which they point with pride. The roads invite tourists from all parts of the world. These tourists not only spend millions of dollars during their travels, but they carry back to their homes the news of interesting places and attractive scenery. And so the fame of the people whose industry in road-building has made travel so delightful is spread among all the nations of the earth. What state or nation would not be proud to have within its borders a road that would last for 2,000 years?

The United States has a few great highways that became famous years ago, and will no doubt become more so in the future. Since travel by automobile has become popular, more people will use these roads and will scatter their fame abroad. Some of them are the old highway from the national capital across the Cumberland Mountains to the west, the Maysville and Nashville Road across the state of Kentucky, the Columbia Road connecting the coast cities of Massachusetts, and the old post road between Boston, New York, and Philadelphia.

Other highways have been built recently, and still others are projected that arouse great interest throughout the nation. One of these is the picturesque Columbia River Road in Oregon; another is the Lincoln Highway; another, the great road leading to

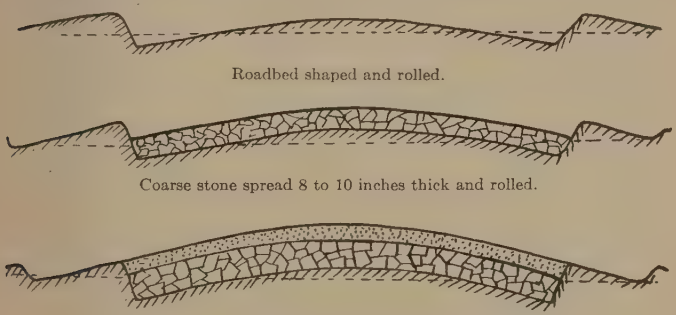
the top of Pike's Peak in Colorado; and still another is the Dixie Highway connecting Chicago with Miami, Florida. Within the next few years, millions of people will travel these roads and will proclaim to other millions who will follow them the wonders of nature and the characteristics of the people along the way. If these roads are kept in good repair, the fact will be told through all the land; if any of them become poor enough to make travel difficult, that fact also will be known.

It should not be forgotten that hotel keepers and other people living in villages along these highways will enjoy no small income from tourists. This fact in itself will doubtless prompt some people to take a livelier interest in road-making.

How to Have Good Roads.—We shall consider the question of securing good roads for all the people. It is often necessary for a state to appropriate money to lay out the road and grade it. Sometimes a county does this by voting a bond issue. This last statement means that the people of the county, by their vote, authorize the county officers to borrow a certain sum of money for a certain length of time, the money to be repaid by a fund raised by levying a special tax on all taxable property within the county. Sometimes the federal government has appropriated large sums to be used in road-building. Just recently, Congress appropriated several million dollars for distribution among the various states. Any county in any state may secure its portion just as soon as the people of that county meet the conditions which Congress has laid down.

But people on the farms should not depend entirely

on these large appropriations for securing good roads. Every farmer needs a good road near his land, whether other people use it or not. He should, therefore, know enough about road-making to direct a force of men in repairing an old road or building a new one. Much valuable information may be secured from the Department of Agriculture, Washington, D. C.; the


Roadbed shaped and rolled.
Coarse stone spread 8 to 10 inches thick and rolled.
Screenings or gravel spread 3 to 4 inches thick and rolled.

THREE STEPS IN BUILDING GRAVEL OR MACADAM ROAD

National Highway Commission, Washington, D. C.; and from the commissioners of roads at the various state capitals. If a piece of work that involves much labor and expenditure of money is to be done, the county and state road engineers should be consulted.

But the majority of people will, in all probability, never be called on to do more than to make an ordinary public road, or to repair one that already exists. The following suggestions will be found serviceable for general use. These suggestions are by no means complete in every detail, yet they embody the elementary principles of all good road-making.

The Kind of Road.—If the people purpose to build a road, the first step is to decide on the kind to be built. This matter will be determined largely by the character of the land, the kind of material to be used, the cost, and other local considerations. The road will, in all probability, be made of stone, gravel, sand, or dirt. The making of roads of logs and planks has become a thing of the past in most sections; and cement roads are not yet popular in the open country.

If there is an abundance of limestone available, and if the county or community can afford the cost of a macadamized road, this will be the best to build. It will last longer and, if kept in good repair, will give more satisfaction than almost any other kind of road. If there is a large supply of chert, or an abundance of river gravel at hand, the choice will, of course, fall upon one of these materials. And the choice will be a wise one, because either, when properly applied and treated, makes a very durable and serviceable road. But if the best kinds of road metal or materials are lacking and the supply of money is too small to bring it from a distance, the road will probably have to be made of dirt or sand and clay.

The Location.—The location of the road is very important. In general, it should be located where it will serve the most people. If the land is level, the question of proper location is usually an easy one to decide; if hills and streams are to be crossed, the road must be located so as to avoid steep grades and treacherous places. Such conditions as the latter

involve questions more difficult to settle. In either case the expert advice of the county or state road engineer should be sought.

In the older settled sections of the country, the roads are already located, some of them well, some of them badly. In many instances, they follow ancient cow-paths or trails used formerly by Indians and pioneers. These trails usually took the most direct way between places, irrespective of grades. As a result, numerous roads are found running over steep hills that should have been skirted, or across marshy land that could have been avoided altogether. This is especially true among the mountains in the southern and eastern portions of the country. Portions of some of these roads cannot be made passable during the rainy season. The only thing to do is to relocate them and rebuild them.

The Grade.—A good road must be built on a proper grade. It should never be more than five per cent. That means a rise of five feet in 100 feet of distance. To secure this grade, or a lower one among the hills and mountains, requires considerable engineering skill. The route must be surveyed and the character of the land must be carefully studied. The importance of a proper grade can be seen from the following table. A team that can pull 4,000 pounds on a level road can, with the same exertion, pull on a

1 per cent grade	3,600 lbs.
2 " "	3,240 "
4 " "	2,160 "
5 " "	1,600 "
10 " "	1,000 "

The grade is determined by the rise of ground in each 100 feet of distance. A one per cent grade means that the land rises one foot higher every 100 feet.

Now the load that a farmer puts on his wagon must be determined not by the grade of the road as a whole, but by that of the steepest place in it. The team may be able to pull a load of 4,000 pounds on all but half a mile of the five-mile market road. If there is one bad hill to cross, the road must be estimated by the amount that the team can pull over that hill. This means more trips, more wear on wagons and teams, more time and money lost.

QUESTIONS

Would it not pay the farmers of every community to see that the grades of their roads are less than five per cent? If this were true of all the roads, their teams could haul twice as much at a load as they now haul on roads of steeper grade.

What are the reasons that keep the farmers from building the roads around the hills instead of over them?

The Making of the Road.—After the road is located, there comes the road-building. Like a grain elevator, a great bridge, or a city office building, a road lasts longer and gives better satisfaction when it has a good foundation. The plan usually followed in building a macadamized road is to dig out the roadbed to a depth of twelve inches or more, and to a width of from eight to twenty feet. Sixteen feet is a good average. The bed is shaped so as to leave the highest part along a line in the middle, from which the sides slope away about an inch or an inch and a half to the foot, until the side

ditches are reached. This bed is then filled with from six to ten inches of crushed stone, which is wet and rolled with a heavy steam roller. Next, the surface is covered with about two inches of finer stone called screenings. This is also wet and rolled until the whole has been packed into an almost solid mass. Whenever possible this finished surface may be oiled thoroughly. This will add materially to the worth of the road and to the pleasure of travel upon it.

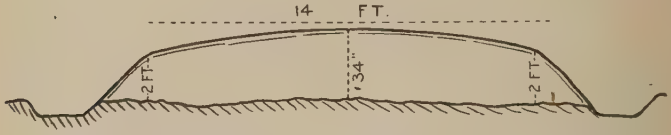
If the road is to be made of gravel, proceed with the roadbed just as in the case of the macadam road. Fill

CROSS-SECTION OF GRAVEL ROAD
Rocks for foundation and gravel for surface make a good road.

the bed with crushed or broken stone. Put the gravel on top of this and spread well. Wet and roll thoroughly, if possible. But if a roller is not at hand, the gravel should be kept raked into the wagon ruts, until the whole surface is packed well by passing wagons and teams.

If the road runs through a sandy country where little or no hard road metal is available, the bed should be thrown up a foot or two higher than the land on either side, and the surface should be sloped as usual and covered with sand mixed with clay. This will soon harden, and if kept properly dragged to prevent ruts from forming, it will turn the water from the surface and support the ordinary traffic that passes over it.

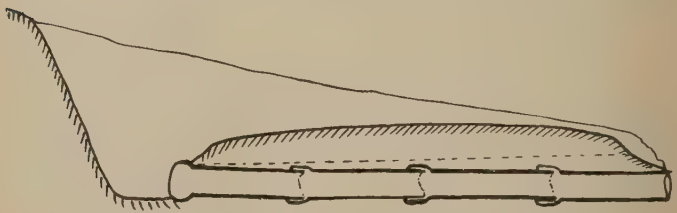
If only dirt is to be used, the bed should be thrown up as in the case of the sand road. The slant should be made just the same—one, or one and one-half inches to the foot. All rocks and sticks should be



CROSS-SECTION OF DIRT ROAD ON LEVEL GROUND
The bed should always be raised well above the land on either side.

removed from the surface, which should be dragged thoroughly with a split-log drag, or some other kind of drag made for the purpose. This treatment will make the surface smooth and will pack it so that it will turn water and carry the traffic.

Drainage.—Water is the worst enemy of a good road. If it stands on the surface, runs in the wagon

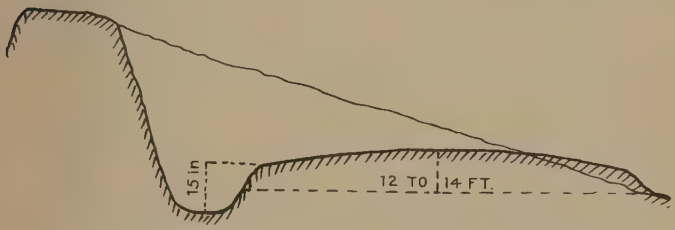


HOW TILE IS LAID UNDER ROAD ON A HILLSIDE

ruts, flows across, or seeps under, serious results are likely to follow. If the road runs along a ridge where natural drainage is good, it is easy enough to protect it from damaging rains, by proper ditching and sur-

facing. But if it runs across low marshy meadow land, or along a stream subject to frequent overflows, or around a steep hillside, the problem of drainage becomes a serious one.

As has been learned already, the surface of a dirt road, or of any kind of road for that matter, should be raised considerably above the land on either side, in order that it may have the proper slant and be above the water that runs or stands in the side ditches during



CROSS-SECTION OF ROAD ON STEEP HILLSIDE
It is always important to have a good ditch on the upper side.

heavy rains. On both sides, the ditches should be cut wide enough to carry the water; and from these, at frequent intervals, other ditches should be cut to carry the water away. Culverts should be built at all low places where water is likely to stand. The water should never be allowed to flow across the surface of a dirt road or a sand road. If it once starts across, it is almost certain to be turned into a rut and will run far enough to soften the surface to the point of destruction.

In some instances, it is necessary to put rock or tiling under the middle of the road for long distances for the purpose of underground drainage. But this device

should be resorted to only in cases of absolute necessity; for it usually involves great labor and expense.

If the road is on a hillside, it is always difficult to secure proper drainage. A side ditch should be cut along the entire upper side, and culverts should be built at all low places to carry the water away. Otherwise, it will seep through the road, or will get into the ruts, and wash gullies that will prove fatal to comfortable travel. It is sometimes advisable to cut on the upper side a second ditch parallel to the first, but on the top of the bank, or higher up on the hill. This drain catches the rush of water during a hard rain, and thus prevents the lower ditch from being filled with mud and destroyed.

SUGGESTION

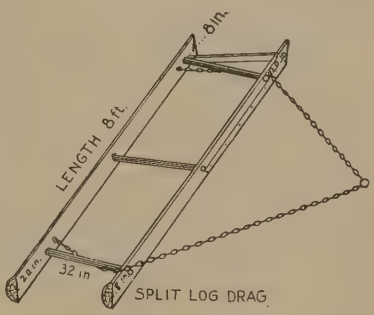
Make a study of some road in your neighborhood and report how it could be drained to better advantage.

Finishing the Surface.—A good road-surface is all-important. It has two chief functions to perform: one is to bear the heavy loads that travel over it, and the other is to turn the rain water from the road.

We have already learned that the surface should slope each way from the middle somewhat like the roof of a house. It should also be curved as is shown in the figure on page 172. In the case of a macadamized road, the proper surface can be easily secured if a roller is used under the direction of a competent engineer. If gravel is used, more time may be needed to complete the surface, because it is necessary to depend on traffic to crush the gravel and make it fine enough to

act as a binder. This is the case especially in those places where a roller is not to be had.

On a sand or a dirt road, it is much more difficult to get the surface properly finished. It can best be accomplished by using a road drag under the right conditions. The Department of Agriculture at Washington issues Farmers' Bulletin No. 321, which tells how to make and use a split-log drag. This bulletin can be obtained by writing for it, and it should be in the hands of every farmer who has a dirt road on or near his farm. The drawing which appears on this page shows the drag ready for use. When the road is new, this drag should be used until the surface is smooth and properly slanted; it should be used as often afterwards as is necessary to keep the surface free from holes and ruts.



The best time to use a drag is after a shower, when the dirt has become dry enough not to roll up as mud as the drag goes over it. Constant dragging will insure a good surface that will turn water and bear the traffic that passes over it. In many parts of the country, in the South and Middle West especially, farmers usually drag a portion of the road after every shower. They do not wait till an overseer warns them to work the road. They have learned by experience

that it pays in actual dollars and time to work it at all times during the year when it needs it, whether the law calls upon them to do so or not.

Would it not be a wise plan for the boys of every school to learn how to make a piece of road by actually doing it? Many schools do this sort of thing. As a consequence, when the boys and men of the community may later find it necessary to make a piece of road, they know how to do it. The boy who travels over a good road that he has helped to build has a different attitude toward road-building.

Repairing the Road.—No road can be good very long unless it is kept in repair. If a "stitch in time saves nine" in a sock or a pair of trousers, a bit of work done promptly will save nine times as much labor and expense in road-repairing. The best rule to follow in this, as in many other things, is, "Do It Now."

If water gets started down a rut from the overflow of a ditch, if a "chuck-hole" forms at the edge of a culvert, if a deep rut is cut in a soft place, it is wise to repair the damage at once. A bad place in the road, like a hole in the sock, grows worse by constant wear.

The material used in repairing the road should be the same as that used in building it. The necessity for this cannot be overemphasized. No one would make the mistake of patching a serge coat with a scrap of calico, nor a silk shirtwaist with a piece of gunnysack. A piece of cloth like that from which the garment was made would be used. Now the same rule must be applied to road-mending. If it is a macadam-

ized road, use crushed stone or screenings. If it is a sand road, use sand mixed with clay. If it is a dirt road, use dirt.

Frequently, a bad mud-hole in a dirt road is filled with rocks, pieces of rails, and limbs from trees. Over this a little dirt is thrown to fill up the crevices and hide the poor work. This is a very bad way to repair the spot. A rock in a dirt road gives about as much satisfaction as gravel in the shoe.

A better way to repair such a place is to drain the water out, let the hole dry, and then fill it with earth, which should be well packed. This method will make

SECTION OF A ROAD, SHOWING RUTS

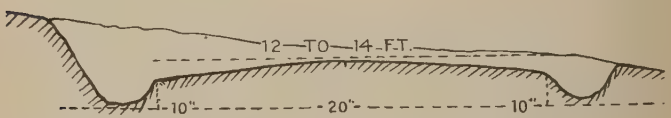
These should be kept filled. On a dirt road the split-log drag solves the rut problem.

the spot like the rest of the road and will leave no rough place to bump over.

When to Work the Road.—Roads should be worked as soon and as often as they need it. No farmer would run a delicate machine that is very much out of repair; nor should he run a machine or a wagon over a road that needs remaking, unless it is absolutely necessary. Roads need constant attention throughout the year. Farmers should not wait until the road is so wholly worn out that it must be rebuilt. It is far better to repair mud-holes and other treacherous places before they become serious. This custom is followed in England, Germany, and other European countries. If the county does not provide money for such con-

stant repair—a thing that every county or township could well afford to do—the farmers themselves who live along the road and travel it daily will find it to their own advantage to look after it. They should examine the road after every rain and see that every beginning of a bad place is repaired before further damage is done.

The laws in many states provide that a certain number of days be set aside every year for working the road. The men of each community are "warned" a few days



CROSS-SECTION OF DIRT ROAD ON SLOPING GROUND
See that the roadbed is raised above the ditch on upper side.

beforehand by the local road overseer. When the appointed day arrives, they all meet at a certain place to begin the work. Frequently, however, they work in a haphazard manner for the time required of them; then they stop. The arrangement, on the whole, is a poor one; for, in most instances, the bad places must wait a whole year for attention, and the repair work often does not repair at all. Many farmers persistently object to working the road. They look upon repair work as a necessary evil, and believe that it should be done at the expense of the county or the state or the national government. As a result of this attitude, they often do poor work and stop at the minute their time is up.

QUESTIONS

Why is it that people who use a road constantly, and whose prosperity depends largely upon it are so frequently unwilling to help build it and keep it in repair?

Would it be a good plan for the farmers of every community to have special road days during the year when all could come together for building new roads or improving the old ones? Would it not be well for them to do this whether the law requires them or not?

QUESTIONS FOR DISCUSSION

1. Study a piece of road near your home and report how it could be surfaced properly. What tools and materials would be needed for doing the work?

2. Study a bad place in the road and tell how better drainage could be secured.

3. Write a letter to a farmer telling him of the importance of having the road properly graded.

4. Prepare a talk on "How to Make and Use a Split-log Drag."

5. Make a split-log drag and keep it at the schoolhouse for demonstrations. See Farmers' Bulletin No. 321.

6. One man owns 200 acres along a good road. This land is valued at seventy dollars an acre. Another man three miles from the good road owns 200 acres valued at sixty dollars an acre. What could the second farmer afford to spend on road-building in order to make his farm as valuable as that of the first?

7. Examine a piece of road on a hillside and report how it may be improved.

8. Examine a road running up a steep hill and report on how to secure a better grade.

9. If a good road increases the market value of land five dollars an acre for a distance of half a mile on each side of the road, how much increase would there be in the price of farms lying along one mile of road? Along a road twenty miles long?

If it cost $1,500 to make the road, could the farmers afford to pay it?

10. A set of good harness can be bought for thirty-five dollars. On good roads this harness will last for ten years. On bad roads it will last about three years. If the farmers of the community drive seventy

teams over bad roads constantly for ten years, what will the community lose on harness alone?

11. The life of a wagon on good roads and bad roads is about the same as that of harness. How much would the above community lose on wagons in ten years if wagons cost seventy dollars each?

12. It costs about eight cents to haul a ton of produce on one mile of well-graded road. On very bad roads it costs about three times as much. How much does a farmer lose who hauls twelve tons of produce over eight miles of bad roads?

13. Suppose forty farmers live in one community. Each hauls, on the average, fifteen tons of produce during the year over nine miles of bad roads. What does the community lose?

14. There are forty country stores in a county, each using, on the average, six tons of merchandise a week through the year. This merchandise must be hauled by wagon over bad roads that average twenty miles in length. What do the bad roads cost these forty merchants during the year? Who must pay this cost? How do they pay it?

15. There are 3,200 farmers in a county who haul, on the average, ten tons each of produce over eighteen miles of bad roads. How much do bad roads cost this county?

16. Suppose you prepare a paper on "What Bad Roads Cost a Community." Send this to your county newspaper for publication.

17. Prepare a speech to be delivered to a company of farmers, telling why they should all join together to build good roads and keep them repaired.

18. Why does the prosperity of a community depend on good roads?

19. How do bad roads affect the cost of living?

20. Which is better, for Congress to spend money in building locks and dams in rivers, and expensive postoffice buildings in small towns, or to spend this money in building good roads for all the people? Why?

21. Write a letter to your congressman telling him how $50,000 spent on the roads in the county would do much more good than the same amount of money spent on a postoffice building at the county seat.

22. Prepare a paper on "The Money Loss Is Not the Biggest Loss Caused by Bad Roads." Speak of the effects on schools, churches, the grange, the farmers' institute, the social life in the community.

23. Suppose you arrange for a parents' meeting and discuss the topics suggested above.

CHAPTER XIII

Protecting Wild Life on the Farm

In the work on the farm, the farmer and his children are constantly brought into close contact with many different forms of life. The fields and pastures constitute a great world of activity, where hundreds of kinds of living creatures come into existence, play their part in the great program of nature, and pass away. Some of these various forms of life are helpful to the farmer; others are harmful. It is the purpose of this chapter to make some distinction between the forms of life that are harmful and those that are helpful, and to show how the useful kinds may be protected.

Insect Life on the Farm.—In strolling across the fields and pastures in the summer time, one is always impressed by the different kinds of insect life among the grasses, weeds, and trees. Ants by the thousands appear; spiders, grasshoppers, flies, beetles of many kinds, small bugs, gnats, and mosquitoes abound. There are butterflies of many varieties and worms without number. Everywhere, on clod, flower, leaf, and grass blade are insects building their homes, disposing of their eggs, or securing their food. Few farmers ever become acquainted with the names and habits of all of them, and there is no reason why they should try to do so; that must be left with the people

who have time and inclination to spend years in the study of nature. But it is important that all farmers and farmers' children should know whether certain insects are harmful or helpful, and whether they should be protected or destroyed.

The Harmful Insects.—The insects which receive most attention are those that harm growing crops. The codling moth injures the apple; the peach borer impairs the peach tree; the potato bug, if unmolested, works havoc with the potato crop; and the cutworms do great damage to early beans, cabbages, and tomato plants. In great wheat sections, the Hessian fly injures much of the crop at times; and in the cotton belt of the South, the boll-weevil is the ever-present enemy of the maturing plant.

The loss to farmers caused by these harmful insects has long been so great that men from different departments of the national and state governments have spent years in finding out what protection can be used most successfully against them. The life habits of all these insects, together with any others that injure both plants and animals, have been studied carefully, and remedies are now known for most of them.

Information as to the best ways of combating any of the insects mentioned or any others that cause injury to crops or animals should be obtained from the Department of Agriculture, Washington, D. C., or from the State Experiment Station. Bulletins published for free distribution tell just what to do for "gapes" in chickens, San José scale on fruit trees, codling moths, cabbage worms, gypsy moths, boll-

weevils, etc. Anyone desiring such bulletins has merely to ask for them at the places mentioned.

One of the most noxious of all insects is the common house-fly. As a carrier of disease he has not an equal

SPRAYING FRUIT TREES AT A FARMERS' MEETING

These public demonstrations enable the farmers to learn the best and most economical methods of producing better fruit.

in the whole insect world. Aside from the annoyance he occasions by crawling over the body, he causes the deaths of nearly 100,000 children and a large number of older people in the United States, every year. Every device known for getting rid of flies should be employed.

The habits of flies and the best means of destroying them are discussed in the chapter on *Health and Sanitation*, and need not be repeated here.

THE RESULT OF PROPER SPRAYING

The fruit is free from the ravages of the scale and of the codling moth and is worth much more in the market than the fruit of trees neglected.

Great loss is experienced by farmers in the South from the murrain tick, which causes the dreadful disease of murrain among the cattle. The loss to cattle raisers in the border states became so serious, a few

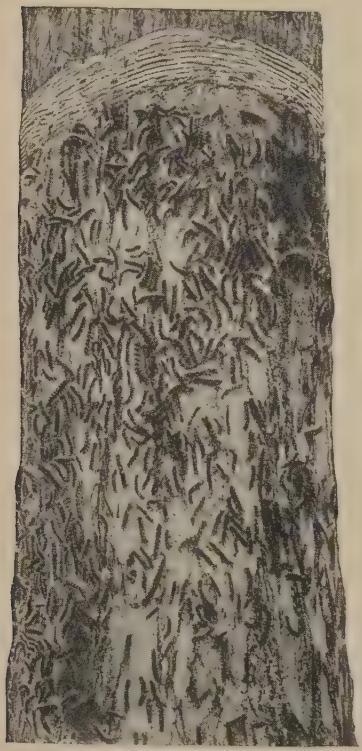
years ago, that the federal government found it necessary to establish a quarantine line, shutting off the infested states from the rest of the Union. The best ways of combating the ravages of this tick are described in bulletins issued by the experiment stations of the various states where murrain ticks are found.

A most injurious insect is the common house flea. He is likely to be found where rubbish accumulates, in or under houses, and where dogs, cats, and pigs run at large. The surest way to get rid of the flea is to keep these animals away from the premises and to keep the place clean. When it becomes generally accepted that these insects are responsible for the spread of bubonic plague and other deadly diseases, greater care will no doubt be taken to keep the premises free from them.

MOSQUITO ENEMIES
A few goldfish will eat many mosquito wrigglers in the course of a day.

Wherever people go in the land, they find mosquitoes. The swamps of the South and many sections of the far North teem with them. They are harmful wherever they are. They not only annoy people who seek rest in the open country, but they are solely responsible for the spread of two deadly diseases—yellow fever and malaria. They often abound about the farm home, especially if the house is located near a swamp, a stock pond, or a sluggish river. The eggs are deposited in

still water, where they hatch in a few days and live as wrigglers, or "wiggle-tails," until they become mosquitoes. One of the most common breeding places is the rain-barrel that stands under the eaves of so many farmhouses. These barrels should always be kept covered, so that the eggs cannot be deposited in them.



SAVING THE TREES

A band of sticky substance painted around the trunk of the tree prevents the gypsy moths from climbing up to the foliage and ruining the tree.

The best way to prevent mosquitoes is to destroy their breeding places by draining off or emptying all standing water near the house. If this is not possible, a little kerosene poured on the water will kill all the eggs and the wrigglers.

The Useful Insects.—We have mentioned only a few of the noxious insects. People often forget that some insects are very useful and should be protected at all times. Among these are bumble bees, honey bees, dragon flies, and robber flies. Several kinds of wasps and the ichneumon flies are

always useful, because they destroy caterpillars that do harm to trees and vegetables.

Every farmer who can keep bees should do so. They not only supply the home with an abundance of honey, but they render a very much greater service by fertilizing certain kinds of fruits and vegetables. Many kinds of fruits and seeds will not mature, unless bees have access to the flowers and carry the pollen from one blossom to another. The apple, squash, cucumber, pumpkin, melons of different kinds, various vegetables, and numerous flowers depend largely on the bees for their beauty and other fine qualities.

For this reason, bumble bees are far more useful than is generally understood. The popularity of the bumble bee with the average farmer boy lies chiefly in the fact that the bees make their nest in some convenient place in an old stump, in a log, or under a rock, where the boy can discover it and kill the entire brood. The boy is usually unaware of the fact that a good crop of clover seed will not mature unless the bumble bees visit the clover blossoms in very large numbers.

Dragon flies, also called "mosquito hawks" and "snake doctors," are useful, because they destroy great numbers of annoying insects. They are found in largest numbers about streams and stock ponds, where injurious insects breed abundantly.

For a similar reason, the robber flies—those big hairy fellows that fly along a path just ahead of people on hot days—may be numbered with the farmer's friends. So may the hornets, whose reputation for stinging puts them in the class of enemies. Both catch

and destroy a great many flies and other harmful insects.

Wild Animals of the Farm.—There was a time in the memory of people now living when forest, field, and meadow were teeming with wild animal life.

WILD ANIMAL PESTS

California ground squirrels undermined the bank of this irrigation ditch until it gave way and damaged many acres with the overflow. Muskrats will do similar mischief.

Deer, elk, buffaloes, wolves, foxes, beavers, bears, raccoons, and catamounts were abundant. The streams were filled with fish; and wild turkeys and other game birds abounded.

Game.—With the increase in the number of people, and the improvement in firearms, practically all of the

largest animals and a large percentage of the small ones have disappeared from most parts of the country. Our forefathers frequently killed game with no thought for the effect such slaughter would have on the lives of the people of today. Hunters made long trips to the western plains, and killed buffaloes, merely for the love of killing. Deer, bears, wild turkeys, wild ducks, and geese were so sought by gunners that they became extinct over large areas. Even prairie chickens, quails, rabbits, and squirrels are becoming scarce.

We who live today cannot have for food such game as our forefathers had. Even the game laws, which were, in many instances, not made until it was too late for them to be very effective, and which are often poorly enforced, do not adequately protect the game. There is still so great a desire among men and boys of the open country to kill any wild animal that shows itself in the field that it is hard to secure for the game laws the full support of the public. Until every man and boy on the farms all over the land is impressed with the importance of wild game in our economic life, it is hardly probable that there will be an appreciable increase in the wild life of the fields and forests.

The game that exists at present should be carefully preserved. This does not mean that people should not kill rabbits, squirrels, wild turkeys, deer, geese, and ducks in the hunting season. But it does mean that these animals should not be killed ruthlessly. By ruthless killing is meant the killing of large quantities of game for the market. This is prohibited by law in many states. Such laws should always be carefully

enforced. But it is not necessary for people to wait for laws to protect wild game and other wild life on the farms. Every man and boy in the land can easily do his part in protecting the game about him, and in using his influence to get others to do the same.

Wild Animals Not Game.—Besides the game animals, there are numerous other wild creatures found on the farms that are well known to every farm boy. Field-mice, moles, lizards, toads, and snakes are abundant almost everywhere. Others, such as prairie-dogs, weasels, porcupines, and badgers, are found in some sections.

Many of these animals are harmful to people and to growing crops; others are beneficial. The moles and field-mice are always harmful and should be destroyed whenever possible. Lizards, toads, and most snakes are helpful to farmers. The chief value of the toad lies in his habit of feeding on flies and other harmful insects. During the summer season, the toad hops persistently about lawns and gardens, catching flies, lightning-bugs, and numerous other insects as they stir in the grass and weeds. The same argument may be used in favor of the lizard. His food consists largely of ants and other insects, many of which are harmful to fruits and vegetables.

There is a widespread mistaken idea that lizards and so-called "scorpions" are poisonous. As a matter of fact, there is only one kind of poisonous lizard in our entire country. That is the Gila monster found in the extreme southwestern part of the United States. What the majority of people call "scorpions" are not

real scorpions, but are merely highly colored lizards. They are not poisonous, because they have no teeth to bite with and no sting about the body. They may be handled with perfect safety, are useful as insect destroyers, and should be protected. The real scorpion found in the southern states possesses a poisonous sting. As it resembles a spider more than it does a lizard, it may easily be distinguished from the lizards.

BLACK SNAKE SEARCHING FOR A BIRD'S NEST

These snakes, although useful when they prey on the field-mice, yet cause the deaths of many of the young birds.

Snakes.—Snakes constitute another well-known form of farm life doomed to death at sight, because of wrong ideas that the majority of people have about them. Many snakes, owing to their habit of feeding on field-mice, rats, and various kinds of worms, are very useful to farmers. The racers, cow-snakes, chicken-snakes, whip-snakes, colubers, ground-snakes, garters, king-snakes, hog-nosed snakes or "spreading vipers," green snakes, and all the water-snakes, except the cottonmouth, are entirely harmless. Many of them render invaluable service to farmers.

But the instinctive fear of snakes, so well developed in most people, makes it hard for anyone to convince those who live in the open country that these useful reptiles ought not to be destroyed. "A snake is a

snake, whether he is poisonous or not, and he ought to be killed," is a common saying among farmers. Much of this hatred has grown out of the knowledge of the part the serpent plays in the Biblical story of Adam and Eve. This feeling has developed into a sort of grudge against all serpents of whatsoever kind. In the minds of thousands of people, a snake is in some mysterious way closely associated with popular ideas of the devil; and even the harmless and useful kinds must suffer because of this superstition.

It is important, however, that careful distinction be made between the useful snakes and those that are really poisonous. Of the latter there are only four kinds found in the United States:

(*a*) The rattlesnakes.
(*b*) The real water-moccasin, or "cottonmouth."
(*c*) The copperhead.
(*d*) The coral-snakes.

There are more than a dozen species of the rattlesnake; and these are distributed throughout the United States. They should be killed whenever they are found.

There is only one really poisonous water-snake, the "cottonmouth." He is confined to the streams and swamps of the southern states. There is an opinion among many farmers that all water-snakes are poisonous; but this is not true. The fact that in many localities these snakes all go by the common name of "water-moccasin" leads to their wholesale destruction at the hands of farmers and farm boys. The real water-moccasin is very poisonous, but he is rarely met with in streams north of Tennessee.

The copperhead, which is very poisonous, is widely distributed over the land. His habits are too well known by country people to need any description here. He should always be killed at sight.

The coral-snakes are confined to the extreme southern border. There are only two kinds known to exist in the United States, and these are not found in very great numbers.

From the foregoing discussion it may be seen that the great majority of common snakes are entirely harmless, and that many of them are very useful on the farm. Although many are known to destroy toads, and some, like the black racer and chicken-snake, feed occasionally on young birds, and even more rarely on very young chickens, the good they do by destroying rats, mice, and other small rodents is vastly greater than the harm done to birds and chickens. The harmless kinds should be protected at all times, and only the poisonous few should be killed.

Fishes.—One of the first things that young people learn in the study of United States history is that America when discovered by the Spaniards was inhabited by the Indians, who lived chiefly by hunting and fishing. These red men had long relied upon the lakes and streams for an unfailing supply of wholesome food. They obtained the fish by shooting them with arrows, killing them with spears, catching them in traps, poisoning them with smartweed, and by groping. The simple devices used were not in any large measure destructive to the fish, and did practically no injury to their young.

The early white settlers promptly learned the ways of the Indians, and soon relied upon the chase and upon fishing for their daily food. In doing this, they followed the custom of millions of people elsewhere on the earth. Along the shores of Japan, in the Philippine Islands, New Zealand, the British Isles—in fact, on practically all the islands and coast lines of the globe people have long found the surrounding waters an apparently inexhaustible source of food. In the interior, also, of great countries like the United States, countless thousands dwelling along the streams derive a living in the same way.

Diminished Supply of Fish.—With the growth of population in these places, the demand for food has constantly increased. This growing demand, together with improved methods of capture, has gradually diminished the supply of fish. Cutting away the timber from streams, especially near their sources, and so causing them to dry up in the summer time, has contributed to the disappearance of the fresh-water varieties.

This condition is especially true in our own country. Streams and lakes that once abounded in salmon, red-horse, bass, trout, whitefish, channel-cats, and other choice food fish have in many instances long been emptied of their treasures. It is true, as well, of certain kinds of valuable fish along our seacoasts. The shad, mackerel, cod, groupers, rockfish, mullets, spots, snappers, and salmon are, in many localities, becoming exceedingly rare.

It is a matter of regret that this is true. The lakes

and streams of the interior and the coast waters would now furnish a much larger percentage of our meat supply, if the fish had been carefully protected, rather than ruthlessly destroyed by people who took little thought for the generations of the future. One angler in writing about trout says: "This is the last generation of trout fishers. The children won't be able to find

A STATE FISH HATCHERY

Where the young food fish are hatched and cared for until they are large enough to be safe in the streams. Linlithgo, New York.

any." What he says of trout is too painfully true of many other fish of equal relish.

But the most serious phase of the problem is the shortage in the meat supply, which in many places is already keenly felt. Individual families living near small streams that were once well stocked have already been deprived of much of their food by thoughtless fishermen, who, with gill-net and dynamite, have long since practically emptied the streams of their treasures.

Catching Devices.—This destruction has been

accomplished by every kind of catching device that greedy and money-seeking men could invent. Between the time-honored pin-hook and the great salmon wheels of the Columbia and Yukon rivers, hundreds of con-

SEINING OUT THE YOUNG TROUT

They will then be transferred carefully to those streams where they will grow to their full size.

trivances have been employed. In most instances, during these latter years, the device that would land the largest number of fish in the shortest time and at the least expense has been the favorite. The drag-net, the gill-net, the pound-net, the huge trap, dynamite, poison, the close-mesh seine have all helped to exhaust the supply in hundreds of streams. In addition, there are hundreds of thousands of hook-and-line fisher-folk and thousands of vacation

seekers, who draw constantly upon the ever-diminishing supply.

Fish Plentiful in Some Localities.—But in spite of all this, there remains, in many sections of the country, a goodly supply of fish which, if properly protected, may be used as an ever-present supply of food. There are places that still abound in salmon, channel-cats, bass, trout, redhorse, whitefish, and moon-eyes. They can be made of great economic importance in our national life. Some of them, like the various kinds of bass and salmon, are widely distributed in the streams and lakes of the country.

Many men engaged in the fishing industries have made huge fortunes from the salmon trade in the northwest, the whitefish trade of the lake region, and the mackerel and snapper trade of the eastern and southern coasts. There is no way of estimating the incomes of the thousands of individual fishermen on the streams and lakes of the interior; but it is safe to say that they amount to many millions of dollars annually. With the reckless destruction of fish, all these incomes will be very much diminished.

Government Protection of Fish.—For many years, the United States Government has endeavored to keep a supply of fish in the streams by maintaining hatcheries, from which hundreds of millions of young trout, bass, salmon, whitefish, and other varieties are liberated annually in suitable waters. The young fish are sent in large cans to any part of the country upon the request of congressmen or any other recognized authority. Streams may be restocked at any suitable

time with the kind of fish best adapted to that particular region; and the supply may be renewed without charge as often as necessary.

In addition, the various states have passed numerous fish and game laws which aim at the protection of fish from ruthless destroyers. It is to be regretted that, in many localities, these laws are unpopular, and that public opinion is not sufficiently in their favor to guarantee their enforcement.

It is the duty of everyone in the open country to support the laws, and to coöperate with the United States Government and the local state authorities in protecting the fish and in increasing the supply. Aside from the healthful and joyous sport of fishing so well known to all true anglers, the question of a food supply for the masses is important enough to invite the coöperation of all who believe in utilizing any important natural resource for the good of all the people.

Our Friends, the Birds.—Birds are by far the most important group of wild inhabitants of the fields and pastures. At all seasons they are the constant companions of the field worker, assisting him in the most industrious fashion and cheering him with song. Some are up long before the farmer is about. They begin promptly their occupation of feeding, which often continues throughout the day. At night while the farmer sleeps, others fly constantly over fields and pastures, preying upon small animals that do great injury to growing crops.

In spite of the many books and magazine articles that have been written about birds and their habits,

there still exists a widespread ignorance of the names and usefulness of most birds. To the average farm boy, a bird of any kind whatsoever is but a target for stones. The books and magazine articles have never reached him. He has never been taught that birds render a service to the farmers of the United States that can scarcely be reckoned in dollars and cents.

The Harmful Birds.—There are a few birds that are really harmful. They feed on grains and fruits, catch chickens, and destroy other birds that are more useful. During the last few years, careful studies have been made by a number of men in the employ of the United States Government to determine just which birds are harmful and which are not. The results of their studies enable us to say definitely which should be destroyed and which should be protected.

There are three kinds of hawks that do much more damage than good. These are the goshawk, or partridge hawk; the sharp-shinned hawk, known also as pigeon-hawk and little blue darter; and the cooper's hawk, widely known as chicken-hawk or big blue darter. They prey upon small chickens, quail, grouse, ducks, rabbits, and song birds that destroy weed seeds and harmful insects. They should be shot at sight.

At times, the crows, blackbirds, jays, bobolinks, and shrikes do considerable damage. But the good they do should be sufficient reason for sparing their lives. Crows sometimes pull up corn, eat green corn in the fields, devour young birds and rabbits, and "break up" hens' nests; but the large numbers of grubs and other insects which they destroy make them of great service

to farmers. Blackbirds and bobolinks sometimes eat grain in the field; but they usually pay for it by destroying countless insects. The shrikes occasionally kill small song birds, and jays are known to destroy the eggs of more useful birds; but even these faults do not overbalance the good they do.

The English sparrow properly belongs with this list of harmful birds. He destroys vast numbers of harmful insects, but he also eats grains and vegetables. He is guilty of two other great faults. He defiles the house by collecting great quantities of trash into the gutters and under the roof, and he persistently drives away other birds that are much more useful. The bluebird and the house-martin, once so plentiful, are retiring in most places before the hordes of English sparrows, which battle with them for their nesting places. The sparrows should be killed by every conceivable means, in order to prevent them from driving out other birds which the farmer can hardly afford to lose.

The Seed-eaters.—Professor Beal estimates that in Iowa alone the tree sparrows destroy 875 tons of weed seed annually. It would be interesting to figure out the amount of seeds that these birds alone destroy in all the country. If we add to it all that other sparrows destroy, the entire amount will be too large for the mind to grasp easily. Think of the number of acres that 875 tons of weed seed would plant! Multiply that number by twenty, and the result will be something like the amount of seeds that all the sparrows will destroy in the one state.

But sparrows are not the only seed-eaters. Another

man, Mr. Judd, estimates that the bobwhites destroy 573 tons of weed seed in Virginia during each year.

A VALUABLE ASSISTANT TO THE FARMER

A farm that the birds feel at home on will suffer far less from insect pests than one where they are not welcome.

Add to this amount all that the other birds destroy, and you will readily see their value to the Virginia

farmers. And what is true of Virginia is true of all the southern states, the middle-western states, and a large portion of the East.

The Great Value of Birds to the Farmer.—Nearly all the birds that visit the farms in all parts of the country render a very valuable service to the people. This service consists chiefly in their habits of destroying weed seeds and insects that damage crops and trees. The quail, grouse, bluebird, catbird, oriole, robin, mocking bird, cardinal, tanager; all the many different kinds of sparrows, except the English sparrow; all the warblers and the fly-catchers feed on weed seeds, plant-lice, and other insects.

The Insecters.—Many birds live almost exclusively on insects. Among these are the fly-catchers, including the phœbe, the wood pewee, the giant fly-catcher; and the warblers, which include a very large number of our most beautifully colored songsters. These birds spend the winters in the far-away South. They begin to arrive in the Kentucky latitude in late April, and increase in numbers until the tree-tops and the shrubbery near the houses are alive with them. Some of them spend the entire summer with us. They rear their young and do their full share of destroying the myriads of insects that infest the budding trees. The vireos, the chat, the hooded warbler, yellow warbler, Maryland yellow-throat, and a score of others remain with us all summer long. Many others visit us twice a year for a few weeks at a time.

There is no possible way of calculating the number of insects that they destroy. Any estimate would be a

mere guess. But it is safe to say that the benefit derived from the summer visitors alone amounts to many hundreds of millions of dollars a year.

Here is a list of birds that should always be protected:

Bluebird.	Robin.	Thrushes.
Wrens.	Cardinal.	Tanagers.
Fly-catchers.	Nuthatches.	Night-hawks.
Larks.	Mocking bird.	Doves.
Chickadees.	Catbirds.	Woodpeckers.
Chewinks.	Tufted titmouse.	Juncos.
Warblers.	Finches.	Kinglets.
Grosbeak.	Cedar-bird.	Pipit.
Swallows.	Orioles.	Martins.
Owls of all kinds.	Cuckoos.	Killdeers.
All game birds.	Buzzards.	Eagles.
All sparrows except the English sparrow.		
All hawks except the three mentioned above.		

This list is not complete, but it contains the names of the majority of common birds that are most useful to farmers. Some of them deserve special mention. Public opinion is divided regarding a few; but every boy on the farm should have an intelligent opinion when he hears them condemned.

The catbird is often regarded as an enemy because he eats strawberries, cherries, raspberries, currants, and other fruits in season. It should be remembered, however, that catbirds are present during the greater part of the year in most sections of the country and that they destroy millions of harmful insects. The farmer can well afford to give a little fruit during the fruit season in exchange for the great service that these birds render.

Night-hawks or bull-bats are among the most useful and the most unfortunate of birds. They catch myriads of mosquitoes, gnats, and other insects, but too often become the targets for heartless gunners, who practice on these useful creatures instead of shooting at clay pigeons. Even a law that is supposed to protect all insecting birds does not save them from the shotgun. Public sentiment should come to their rescue.

The common bat because of his insecting habits deserves much better treatment than he usually receives from farm boys.

The yellow-bellied woodpecker and the downy woodpecker are considered enemies by many fruit-growers. They injure trees at times by drilling belts of holes around them; but if we consider the millions of harmful insects which they destroy when not girdling trees, we must conclude that they do more good than harm.

The cuckoos or rain-crows are also on the doubtful list. The disfavor with which they are regarded is due to a popular superstition. Their call is supposed to "call up" rain, and this belief often leads to their destruction. The fact is that they are among the most useful of the farmer's feathered friends. They are almost the only birds that destroy the tent-caterpillars which do so much damage to orchards and shade trees.

Many people have serious doubts about the crow, the blackbird, the cowbird, and the jay-bird, and this doubt has listed them under the harmful birds. But when their habits become thoroughly known to farmers,

their good qualities will probably outweigh the bad with the majority of people.

Hawks and Owls.—In the list of harmful birds three kinds of hawks were mentioned. Unfortunately, the habits of these three cause practically all hawks to be condemned. To many people in every community, a hawk is a thief and deserves to be shot at sight. The big red-tailed hawk and the red-shouldered hawk, both commonly known as hen-hawks, are numbered among the enemies of the air. They are, in reality, friends of the farmer, because they feed upon field-mice and rats and other small rodents that do great damage to growing crops. Of 500 stomachs of the red-tailed hawk examined by one man, 250 contained mice and only 54 contained poultry and game birds. Of 220 stomachs of the red-shouldered hawks, 102 contained mice and only 3 contained the remains of poultry. These two species of hawk, together with the various other hawks distributed over the entire country, render much more service to the farmer than they get credit for.

All the owls are useful. The character of the great horned owl alone is questioned. They fly at night and catch field-mice and rats, which play in the dark. Their eyes are so constructed that they can see quite distinctly in the dark, and woe to the field-mouse or young rabbit that is off guard when an owl approaches. The whole family of owls has a bad reputation, because they occasionally catch chickens. The amount of poultry destroyed, however, is insignificant compared with the vast numbers of harmful animals which they devour.

How to Protect the Birds.—The first step is to *avoid killing them or harming their nests.* Every boy who has an air-rifle or an elastic sling should remember that he is shooting some of his best friends when he shoots the birds. They help him in the garden, the flower beds, and the fields. They help him to live in comfort instead of being devoured by insects. They destroy insects that would make orchards and shade trees impossible. Knot-holes and English sparrows furnish good targets for young sharpshooters. Song birds and other insecters should never be molested.

Another way is to chloroform the house cat. The common stray cat is perhaps the worst enemy that birds have. A great many birds, like the jays, robins, thrushes, wrens, sparrows, and bluebirds, build in the orchards and in shrubbery close to the houses, where orchard and garden insects may be obtained easily. Cats, therefore, have easy access to them and to their young. Owls, hawks, skunks, foxes, snakes, and a few other bird enemies also lurk about. But in thickly settled communities, most of the wild enemies have been exterminated or driven away, so that all of them together probably destroy fewer birds than do prowling cats. One writer records that he saw one cat destroy six birds' nests in a single day. Another estimates that each prowling cat will destroy fifty birds in a season. When it is known that each of those birds would destroy probably a hundred worms and bugs, or several thousand plant-lice each day, for three months or more, it would not be hard to decide which renders more service to the farmer—the birds or the cat.

Provide nesting places for the birds. Fruit trees and shrubbery near the house will always be selected by many birds for their homes. Boxes, gourds, and special bird-houses can be erected with little expense and trouble; they serve the birds as safe retreats where they may rear their young.

Provide food for the birds in both the summer and winter seasons. An extra row of strawberries or a few more currant bushes, raspberry briers, or cherry trees can be planted for the birds. The farmer should remember that without the birds, the insects which they destroy would injure or even destroy his crops. He can well afford to pay something for their services.

In winter, it is often very necessary to feed the birds. Many linger about the house and orchard throughout the cold season; unless food is provided for them during the worst weather, they will suffer. Millet seed and other small seeds, old soup-bones, pieces of suet and bread furnish the food which they sometimes find great difficulty in securing.

Last of all, every farmer and farmer's boy should use his influence to *uphold the excellent laws that most states now have for the protection of both song birds and game birds.* By doing this he will protect both himself and his neighbors against great losses from farm insects, and will help to save hundreds of millions of dollars in fruits and farm crops to the people throughout the land.

QUESTIONS FOR DISCUSSION

1. What wild animals are common in your neighborhood?
2. Which of these travel and feed by night? Which by day?

3. Can you tell what the food of the following animals is: lizards, moles, shrews, field-mice, weasels, chickaree, gray squirrel, chipmunk, rabbit, black snake, prairie-dog, badger, mink, field rat?

4. What can you tell about the way snakes rear their young?

5. Tell how toads and frogs rear their young.

6. Is there much wild game in the fields and forests of your locality? What kinds are there?

7. What do the people do to protect the game?

8. Do the rabbits in your neighborhood do any harm? If so, what is it?

9. Ask some old hunter or trapper to tell you about the game he used to see. Find out what has become of it.

10. How many different kinds of birds can you name? Write out the names of all you can.

11. Suppose you note the different kinds you see for a week, and learn if possible what kinds of food they eat.

12. Which of these do you consider useful? Which are harmful?

13. What can you tell about the way birds make their nests?

14. Can you tell about the nesting habits of all these: robin, field-sparrow, vireo, oriole, giant fly-catcher, killdeer, chimney-swift, barn-swallow, oven-bird, brown thrasher, crow, bobolink, meadow-lark?

15. What do you think of the custom of ladies wearing the plumage of small birds on their hats?

16. Prepare a bird chart showing the following items: name of bird; when seen first in spring; where; where it locates its nest; what it eats; harmful; useful; description. Put on this chart the facts about the birds as they come in the spring.

17. Make a similar chart of all the birds that stay in your neighbor hood throughout the winter.

18. Make a few bird houses and put them up.

19. Where do you suppose birds sleep at night? Find out as much about this as you can.

20. Can you tell what they do during hard rain storms? Put on your raincoat and hat and stay out in a storm and find out all you can about this.

21. Write a letter to a friend telling where different birds make their nests.

22. Watch a pair of catbirds feeding their young. Count the number of trips they make in an hour. Note, if possible, what the young are fed with.

23. Write out the results of your observations and tell why you think these birds should be protected.

24. Watch other birds feed their young. Use a bird-glass if you have one and note the food the young ones take.

25. Write out the results of your observations.

26. Watch a toad eating his supper and write out the results of your observations.

27. Prepare a paper on "What Farmers Should Know about Birds."

28. Write a letter to a farm boy telling him why birds should be protected.

29. Prepare a paper on "The Best Ways to Protect Birds."

30. Learn all you can about the habits of snakes.

31. Write to the Department of Agriculture, Washington, D. C., and ask for bulletins on the value of birds to the farmer. Read them carefully and tell what you learn from them.

32. Learn all you can about the food and the habits of lizards. Write out the results of your studies.

Remember that not one of our common lizards is poisonous. Even the small ones that have blue tails, and the large ones that have red heads may be handled with perfect safety. They are commonly called "scorpions," but they are merely lizards. They cannot bite to hurt.

33. Are there many fish in the streams near you? Have any been put into the streams recently?

34. Write to your congressman and ask him how to secure fish for the streams.

35. Tell how a plentiful supply of fish would add to the joy and the prosperity of the people.

36. Organize a club for the protection of birds, small animals, and wild game. Have this club meet occasionally, and have talks and papers by the different members.

37. The following books will be found useful in studying the birds and other wild life in the community:

Bird Guide; Game Birds; Flower Guide. These are published by Charles K. Reed, Worcester, Mass.

Birds of the United States. Apgar. The American Book Co.

Color Key to North American Birds. Chapman & Reed. D. Appleton & Co.

Our Common Birds, and How to Know Them. Grant. Scribners.

Wake Robin. John Burroughs. Houghton, Mifflin & Co.

The Nature Library. Published by Doubleday, Page & Co., Garden City, Long Island. This set of books is by far the most beautiful, and one of the most readable sets of nature books in existence. It covers the entire field of nature.

CHAPTER XIV

Waste on the Farm

One of the most fruitful sources of waste in the whole country is the barnyard of the careless farmer.

A WASTE OF LABOR

If the farmer would realize that putting fertilizer in the ground enables him to take out crops worth many times the cost of the fertilizer, we would not see many such fields as this.

But on an ill-conducted farm, waste is not confined to the barnyard. The house and yard, the fences, gates, fields, farm implements, fruit trees—almost everything about the place—contribute to wastefulness. This waste on the premises of the careless farmer amounts literally to hundreds of millions of dollars every year. It takes money out of the county and

state treasuries, compels people to worship in poorly built churches, makes children wear shabby clothes, and deprives millions of people of the better things in life.

Were it not for this great waste, men could build better houses to live in, more attractive churches in which to worship, better schoolhouses furnished with good equipment, and could supply all these buildings with everything needed. They could have more good furniture for the home; more pictures, books, carpets, musical instruments, and everything that makes life comfortable. Each county could build all the needed roads and bridges on what careless farmers and their families waste every few years.

What are the causes of great waste on the farm? One need not look long to find some of them. Perhaps, when boys and girls have had their attention called to them, and have had time to think about them, they will resolve to be more careful of their own resources when the time comes for them to have homes and farms of their own.

Neglect of Farm Tools.—A great source of waste is the careless use and abuse of farm tools. Many farmers fail to realize what this carelessness in the use of tools costs them. The plow, when not in use, is often left in the furrow for days and even months. As a result, the metal parts rust and grow weak; while water soaks into the handles and other wooden parts and causes decay. The wagon stands out in all sorts of weather for long periods of time. The wooden parts become soaked with rain and swell to an unnat-

ural size. Then, when the sun shines hot, the soaked portions shrink, loosening bolts, cuffs, and tires—a condition which causes much rattling and wear when the wagon is used. The rain causes rust to attack all the iron parts, so that it becomes necessary to use more

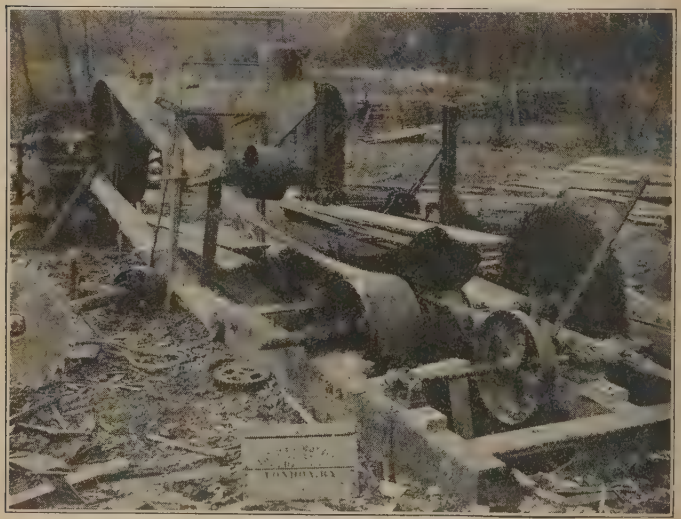
NOT A GOOD SHELTER
A binder ruined because it was not taken into the barn.

grease on the axles, and to replace weakened irons with new ones.

When the hay is cut and raked, the rake and mowing machine, and often the hay-loader are left out in the weather. All are seriously injured by the rain. The mowing machine is especially susceptible to rust and becomes ruined in a very short time. Days of rain followed by days of hot sunshine are very harmful to all wooden parts.

Not only are the tools we have mentioned often left out in the weather, but many others, such as planters,

harrows, hoes, axes, saws, threshing machines, buggies, gasoline tractors, automobiles, and other valuable and often expensive tools, are carelessly neglected. The axes and mattocks get loose on the handles; the threshers, planters, and tractors get rusty and refuse



AN UNSHELTERED SAWMILL

Machinery exposed like this to the elements soon depreciates largely in value through rust and decay.

to work well. Hooks and cuffs become loose on swingletrees, buggies, and rollers, and cause loss of time, material, and money. A good farm wagon can be bought for seventy dollars. With good care it will last for ten years with very little repairing. With poor care it will not last more than five years. How much will a careless farmer lose on wagons alone in twenty years?

What is true of the wagon is true of many other farm implements. If tools receive good care, they last twice as long and give more than twice the service. The self-binder is ruined in a season, if it is left standing out in the weather. Unless unusual care is given to it, it will do poor work and waste grain enough in one field to pay the first instalment on a new machine. Other delicate implements, like the tractor, the cream separator, and the thresher, are either ruined in a very short time or their efficiency is greatly impaired.

The best way to prevent this waste in implements is to keep them in dry places, and to have a can of machine oil at hand for frequent use. A dollar spent for machine oil will soon save twenty dollars in the wear of tools. Many farmers seem never to learn this; but every farm boy should learn it early in life and set a good example for all his friends to follow.

Carelessness about Repairs.—Another constant source of waste is the careless habit of letting things wait for repairs. A gate has a broken hinge that is not replaced. Time is wasted and the gate is soon ruined. The wind tears a board or a shingle off the barn. The farmer is busy and does not replace it at once. A hard rain comes and the water leaks through on the hay and corn, or on the harness and farm tools, and causes much damage. A board or paling is knocked from the garden fence. The chickens or pigs soon find the place and, in a few hours, destroy many dollars worth of vegetables. A stay chain or other iron is broken on the wagon during a busy season and

is not replaced at once. Serious damage to the wagon results, with a consequent loss of both time and money. A nut becomes loose on a plow, a cultivator, or a binder. The farmer thinks, "Oh, well, it has been like that before and didn't break, so I'll let it go a little while longer and then fix it." That "little while longer" often makes it necessary for him to spend several dollars for a new piece or a new machine.

Sometimes serious injury or loss of life results from a defective machine that should be repaired immediately. In southern Tennessee, a group of men and boys were working with a threshing machine, when the belt lacing began to loosen. As there was a little more wheat still to thresh, the farmer decided to run for the few minutes necessary to clear the field. The lacing broke, the belt flew at random; one end became tangled in the machine and caused serious damage; the other end struck a small boy and broke his arm. Another crew of men were working at a sawmill which had an old boiler out of repair. A wooden peg was driven into the steam-chest where an iron plug should have been screwed. When the steam pressure became high, the peg blew out, and the escaping steam burned the engineer and a bystander so badly that they did not recover for weeks.

Improper Methods of Storing Farm Produce.—Still another source of waste in many regions is the hasty or improper method of storing away farm crops for the winter. Hay and fodder are stacked in the fields, where they sometimes remain for months through rain and other changes of weather. This is,

of course, often necessary because of the limited barn room. But the losses resulting from this method of storing would, in a few seasons, pay for a machine to bale the hay and for the additional room to store the crop under shelter.

A SILO

By means of these big structures the farmers are able to realize a much greater amount of cattle feed from their cornfields than under the old system of husking out the corn and then turning the cows loose in the field.

The common method of storing wheat, corn, rye, and other grain throughout much of the South and other sections of the country is also a common source of great waste. The grain is put into cribs or bins, where rats and mice have access to it throughout the year. The loss from these pests alone amounts to millions of dollars in the United States, each year. In a single season, the loss to the individual farmer would equal the amount needed to buy the wire netting necessary to make the crib and bins rat-proof.

But the loss of grain is not the only disaster caused by rats. They scatter diseases that destroy human lives. When the health authorities began a campaign

a few years ago to stamp out bubonic plague in San Francisco and other California cities, one of the first steps taken was to make war on the rats. The rats contract the disease from the bite of fleas that have been on sick rats which move freely about the barn, the chicken-house, and often about the dwelling.

STORING POTATOES

When potatoes are properly stored they remain unspoiled for many months. This is one of the ways in which food may be conserved.

The fleas escape from the sick animals and bite people, thus spreading this deadly disease.

One of the best ways to get rid of rats is to cut off their food supply; for they are huge feeders and will not stay where food is scarce. They can soon be expelled, therefore, by making all granaries, and also rooms where fruits and vegetables are stored, rat-proof, by lining them with wire screen made for the purpose.

In far too many instances great waste comes from lack of knowledge of the best methods of storing fruits and garden vegetables. The number of bushels of apples, tomatoes, turnips, beets, pears, carrots, and other valuable products lost each year because of wrong methods of storing is astounding. One farmer may know how to keep his apples until spring; but fifty others around him do not know. These fifty lose the greater part of their stored-away fruit; but the one disposes of his at a fair price. Another man knows how to keep white potatoes for the spring market, and sells them at a good figure. But a hundred others do not know how to keep them, and not only lose their crop, but are compelled to pay double prices for a supply later.

TREE WASTE

If some of the fruit had been removed and the limbs supported properly, there would not have been this destruction.

Any farmer who does not know how to store his products should at once write to the Department of Agriculture in Washington for free bulletins that tell how to do it. Or, he could write to his state experiment station for the information he wants. If there is a

farm demonstrator in the county, he should of course be consulted. Those who expect to be farmers should learn these things early, in order to escape the enormous loss that comes from rotting apples, potatoes, turnips, and other produce put away for winter use.

HOW A TREE WAS LOST

Heart rot entered at a stub scar (pointed at by the upper stick). It had gone down the trunk of the tree (shown by the lower stick). The wind did the rest.

Neglect of Fruit Trees, Vines, and Other Plants.—Even greater waste than that which comes from poor storage often results from improper care of fruit trees and other farm plants. In these days when the country is becoming so thickly settled, and when fruit trees and other plants are shipped to and from so many places, the diseases that attack these plants are becoming more widespread and destructive. The blight, the black rot, the San José scale, and other diseases attack the orchards and destroy both fruit and trees. So it is with the grape, the orange, and other valuable products. The boll-

TREE SURGERY

By taking out all the decayed wood and filling in with a cement composition, the tree will be made to live for many more years.

weevil attacks the cotton in the South; the rust and the Hessian fly prey upon the wheat in the Middle West; the gypsy moth and the brown-tail menace the shade and forest trees in the East. A destructive disease is taking away chestnut trees throughout the Allegheny Mountains; insects are killing the nation's finest elms; and other deadly enemies of the farmers' trees and the farm products are becoming more common.

NATURE'S HEALING
If the scars are properly treated the new wood will gradually cover the wound.

Whoever would succeed in battling successfully against these new and numerous enemies must keep in close touch with the Department of Agriculture, where information is given out free of charge; or he must get this information from his state experiment station, or from his local farm demonstrator. He must learn how and when to spray fruit trees, grape vines, potatoes, and

other vegetables. And he must spray them or he will be the loser. He must learn how to fight the boll-weevil, Hessian fly, codling moth, brown-tail, and other insect enemies; and he must be willing to spend money in fighting them. If he does not, he will suffer great loss in his farm crops and his bank account.

Neglect of Farm Animals.—It is equally important that the farmer know how to combat diseases in farm animals. Hog cholera, black-leg, pink-eye, murrain, foot-and-mouth disease, diarrhea, gapes, and other disorders are frightfully destructive of hogs, cattle, sheep, chickens, and horses. The loss to the farmers of America from the diseases of farm animals reaches far into the millions of dollars. This enormous loss may easily be classed as waste, because the diseases are preventable.

Every farmer who lives in a section where one or more of these diseases have broken out should at once inform himself and his neighbors concerning the best means of protecting his animals from the new danger. He should see his county farm demonstrator or write to his state experiment station, or to the Department of Agriculture for information. And he should act at once on the suggestions that he receives. He will not only save his own animals, but he may prevent great loss to his neighbors. For when a highly contagious disease attacks the hogs, or sheep, or cattle on one farm, it is almost certain to spread to other animals on neighboring farms.

Destruction of Forest Trees.—The wholesale destruction of forest trees accounts for another great loss to the

farmers. This loss is not confined to farmers, however, but reaches all the people in the land. The loss is experienced in the higher prices paid for houses, furniture, wagons, and all things made of wood. The printers feel it because the price of paper made from wood-pulp is constantly increasing. School children

A SAWMILL

Through carelessness much valuable wood is destroyed. Some of these blocks could be used for small wooden articles such as chair-rungs, clothespins, etc.

feel it because books made from the paper are getting more expensive.

This loss is caused by wanton methods of lumbering and by forest fires. A few years ago, the belief was general that the people of our country would have an abundance of timber to supply their wants for all time. Those who thought so were mistaken. The timber has already been completely cut away from many sections of the land, and is being cut from other

sections so rapidly that, unless something is done to prevent this reckless waste, the supply cannot last many years longer.

It would be a wise plan for every farmer and lumberman who cuts down a tree to plant another in its place. The law requires this in some countries, and it is done in some parts of the United States. But few farmers do it. As a result of carelessness the timber on their farms is rapidly disappearing, if it is not already gone. If the people who shall live on the land many years from now are to have plenty of timber to build houses and barns, make wagons, chairs, tables, beds, and other kinds of furniture, a great many farmers must begin to plant trees and to care for them much as they care for other crops. There are "old fields" in almost every community that ought to produce trees, instead of sedge-grass and brambles and other useless shrubbery.

HOW TO STOP EROSION AFTER IT HAS BEGUN

These brush dams placed across the gullies catch the soil that will in the future be washed down. The hillside will gradually become terraced and can be farmed for many years.

Waste at the Back Door.—There is no way of reckon-

ing in dollars the loss caused by careless and untrained housekeeping. But if such a thing could be done, the figures would no doubt be enormously large. The secretary of agriculture recently estimated that the back-door loss amounts to nearly a billion dollars

LAND WASTE

This was once a trout stream. Now it is nothing but a swampy mudhole; all because the land was not properly farmed and the rains were allowed to wash the good soil into the bed of the stream.

a year. Other authorities place it even higher than that. What passes out of the back door as waste in thousands of homes in the open country would supply other thousands of people with their daily bread.

The dish water that ought to go to pigs or chickens is thrown away. Scraps of meat and bread are thrown out for flies and worthless dogs to devour. Half-eaten pies, fruits, and dishes of various kinds that have stood too long and soured must be thrown away.

A great feast is prepared for friends. A dozen people come; but enough has been prepared for thirty. The housekeeper takes pride in the abundance on her table, and often vies with neighbors in setting a bigger dinner. Whole dishes of food that cannot be kept because of the lack of ice must be thrown out.

Such waste is useless, if not criminal. Every time food is thrown away, somebody must go hungry. In spite of the fact that huge quantities of foodstuffs are produced each year in the United States, there are millions of people who never have enough to satisfy their hunger. Bread-winners must work at low wages because their earning capacity is cut low by too little food. Babies grow thin and develop many deadly diseases because their mothers cannot supply them with proper nourishment. The mothers themselves are often under-nourished; it is not possible that their children can thrive under such conditions. And much of this distress is caused by farmers and farmers' wives, who, in their abundance, throw away the food that should never be wasted.

All who plan to have farm-homes of their own should learn the art of saving the food supply and doing away with the wasteful leaks at the back door.

Knowledge and Forethought Needed.—Now it can readily be seen from what has been said that it is important for everyone to realize the causes of waste on the farm; it is equally important that all learn the means of preventing it. A knowledge of these things will help everybody to understand why many farmers never seem to succeed. Their homes carry mortgages,

their barns need paint, the fences and gates need repair, the children have few books and pictures, the homes have few real comforts—*because there is too big a leak at the back door*. This leak is reinforced by other leaks out in the barn lot and in the fields, where farm tools are kept.

The men and the women who have plenty to live on when they grow old are not always those who make the largest sums of money. They are quite frequently those who learned early in life how to keep from wasting their substance. If farm boys and girls will learn this great lesson well, it will be worth as much to them as any other lesson they will ever learn.

QUESTIONS FOR DISCUSSION

1. Mention some particular causes of waste that you have seen.
2. Tell how some of these causes might be removed.
3. Discuss these topics:
   How boys are sometimes wasteful.
   How girls are sometimes wasteful.
4. Discuss waste and its causes in connection with the following:

The pigpen.	The corncrib.
The hog trough.	A rail fence.
The dairy barn.	The stable.
The bad road.	Shallow plowing.
A leaky barn roof.	Cutting wheat.
The orchard.	The woods lot.
The smokehouse.	Disease in animals.
The kitchen.	The cotton field.
The haystack.	A dragging gate.
Drawbars in the fence.	Butter-making.
Sorghum-making.	Fence corners.
Hillside with gullies.	Plowing ground too wet.
Threshing wheat.	The forests.
The fruit cellar.	Dress.
Ill health of people.	Too many churches.

Suggest ways of preventing waste in the above cases.

5. Write a letter to a farmer telling him how he may cut down his living expenses.

6. Organize a society for the prevention of waste. Elect officers and appoint an executive committee. Plan for a few open meetings, and invite the people of the community to come. Discuss some of the topics mentioned under Section 4.

7. Learn the difference between "stinginess" and "economy."

8. Prepare a paper on "Common Sense in Dress."

9. Prepare a short talk on "The Farmer Who Practices Economy."

10. If a man uses twenty-five cents' worth of tobacco a week, how much would he spend in this way in a year?

11. If he smokes three five-cent cigars a day, what will his bill amount to at the end of a year?

12. Consult a life insurance agent. Learn what a $1,000 health policy will cost for a year. Learn also what a man will have to pay for a $1,000 twenty-payment life policy at the age of twenty-five. Compare these two costs with the amounts in Questions 10 and 11. What do you think about it?

13. A farmer and his four sons use thirty cents' worth of tobacco a week each. His three daughters spend on the average fifteen cents a week each for chewing gum. At the end of the year what will their tobacco and chewing gum bill amount to?

14. What is the cost of a good milking cow? Compare her price with the bill in Question 13. What do you think about it?

15. A farmer's son buys a Colt's revolver for eighteen dollars. Find in a catalog of a tool supply house the cost of a turning plow, a corn-planter, a hoe, a garden rake, a mowing blade.

Compare the cost of the revolver with the cost of these tools.

16. What use will the boy find for his revolver? What use will he find for the tools.

17. At twelve years of age, a boy begins spending fifty cents a month for cigarettes. He keeps this up till he reaches his twenty-first birthday. How much will he spend? How much by the time he is thirty-five?

18. Another boy at the age of twelve begins putting six dollars a year in the savings bank, and continues this until he is twenty-one. The deposits yield compound interest at 4 per cent. What will he have at the end of that time? What will it amount to at the age of thirty-five?

See an insurance agent or a banker and get a compound interest table.

Compound Interest Tables

The following table shows the sum to which one dollar will increase, at compound interest, in any number of years not exceeding twenty-five, at 4 per cent, 4½ per cent, 5 per cent per annum.

Years	4 Per Cent	4½ Per Cent	5 Per Cent
1	1.040	1.045	1.050
2	1.082	1.092	1.103
3	1.125	1.141	1.158
4	1.170	1.193	1.216
5	1.217	1.246	1.276
6	1.265	1.302	1.340
7	1.316	1.361	1.407
8	1.369	1.422	1.477
9	1.423	1.486	1.551
10	1.480	1.553	1.629
11	1.539	1.623	1.710
12	1.601	1.696	1.796
13	1.665	1.772	1.886
14	1.732	1.852	1.980
15	1.801	1.935	2.079
16	1.873	2.022	2.183
17	1.948	2.113	2.292
18	2.026	2.208	2.407
19	2.107	2.308	2.527
20	2.191	2.412	2.653
21	2.279	2.520	2.786
22	2.370	2.634	2.925
23	2.465	2.752	3.072
24	2.563	2.876	3.225
25	2.666	3.005	3.386

How to Use the Table.

Suppose you wish to find what $25 will amount to when yielding compound interest at 4 per cent for 18 years.

By consulting the table it is found that $1 in 18 years at 4 per cent amounts to $2.026. Multiply this amount by 25, and the result will be the amount desired.

The following table shows the sum to which one dollar per annum, paid at the beginning of each year, will increase, at compound interest, in any number of years not exceeding twenty-five, at 4 per cent, 4½ per cent, 5 per cent per annum.

Years	4 Per Cent	4½ Per Cent	5 Per Cent
1	1.040	1.045	1.050
2	2.122	2.137	2.153
3	3.246	3.278	3.310
4	4.416	4.471	4.526
5	5.633	5.717	5.802
6	6.898	7.019	7.142
7	8.214	8.380	8.549
8	9.583	9.802	10.027
9	11.006	11.288	11.578
10	12.486	12.841	13.207
11	14.026	14.464	14.917
12	15.627	16.160	16.713
13	17.292	17.932	18.599
14	19.024	19.784	20.579
15	20.825	21.719	22.657
16	22.698	23.742	24.840
17	24.645	25.855	27.132
18	26.671	28.064	29.539
19	28.778	30.371	32.066
20	30.969	32.783	34.719
21	33.248	35.303	37.505
22	35.618	37.937	40.430
23	38.083	40.689	43.502
24	40.646	43.565	46.727
25	43.312	46.571	50.113

How to Use the Table.

Suppose one girl instead of buying chewing gum deposits in a savings bank $10 on the first of each January. She makes the first deposit when she is 14 years of age, and continues to make similar deposits until she reaches 24. When she is 25 years of age, how much money will she have to her credit?

We will assume that the money earns 4½ per cent interest.

She makes 11 deposits of $10 each, and all these deposits draw interest during the last year. By consulting the table it is found that $1 in 11 years at 4½ per cent amounts to $14.464. Multiply this by 10, and the result will be the amount of money she has to her credit.

Which will be worth more to her, the $144.64, or the chewing gum?

CHAPTER XV

How Our Country is Governed

The Beginnings of Popular Government.—When the earliest permanent settlers landed upon the American soil, one of the first things they did was to come to a definite understanding about the kind of behavior and government they wanted in the new settlements. They drew up certain rules of conduct and outlined a plan for the management of affairs in the settlements, and all agreed to abide by these rules. This seemed necessary in order that each person might share the responsibility for the welfare of the settlement and know just what his relation was to all the other people about him.

When other settlers came, they found the people who were already here living under these rules, and they, too, agreed to abide by them. And when new settlements were made, similar rules were adopted for the people to follow.

As years passed, a great many settlements were made. The people always settled in groups in order to protect themselves from the Indians. A dozen or more families would move to a new place a few miles away, would there clear away the forests, build houses, plant crops, and begin the serious business of establishing homes and making a living. Wherever they went

they usually took with them rules of conduct similar to those adopted in the settlement from which they moved.

After many years had passed, much of the land along the Atlantic coast from Massachusetts to Georgia was settled, and all the people lived under rules many of which they themselves had adopted. Sometimes the king of England made rules for them; but for the most part they decided for themselves what their rules of living should be.

Now, it will be remembered that the settlements were made on land granted to individuals or to companies. For example, the land on which the Massachusetts settlements were made was granted or deeded to the Massachusetts Bay Company; those in Pennsylvania, on land granted to William Penn. The same was true of other settlements. The boundaries of these land grants were rather indefinite at first; but, as the settlements grew in number, they began to group themselves into larger sections called colonies. There were the Massachusetts Colony, the Maryland Colony, the Virginia Colony, etc. And all the settlements in each big group or colony had rules very much alike. These rules or laws enabled the people to punish thieves and other evil-doers, and to collect money for schools and other public improvements.

Now, inasmuch as each settlement had rules for the people to follow, it was necessary that someone be chosen to see that these rules were obeyed. A rule is useless unless it is enforced, and it is not likely to be enforced unless there is someone whose business it is to

look after it. So the people of each settlement selected a chief officer or magistrate to see that everybody obeyed the rules or laws. And inasmuch as the settlements were grouped into colonies with pretty definite boundaries, it was necessary to have a man or group of men chosen whose duty it was to see that all the people of all the settlements obeyed the laws which the group of settlements comprising the colony had adopted. Until the Revolution the head men in most of the colonies were appointed by the king of England; but after that they were always elected by the people.

Thus it may be seen that when the earliest settlers came to America, they adopted rules or laws to live by and to govern all business transactions, and chose men to see that all obeyed the laws. It seems queer to think that people have to choose someone to see that they obey the laws that they themselves make; but it is nevertheless true.

The Colonial Plan Adopted by the Nation.—The plan of government which the earliest settlers adopted is, with many changes and additions, the same general plan as that under which the people of the United States live today. The people are divided into groups such as towns, townships, cities, districts, counties, and states. Each group has laws that the people live by, and it also has its officers, who see that the laws are enforced. These laws are made by the people or their representatives; and the officers are always elected by the people, or appointed by those whom the people elect for the purpose. Whatever form or

name these groups may have does not in any case change the fact that the people themselves have a direct voice in making the laws and in selecting the men who enforce them.

The District or Township.—The first and smallest group of people which you will find in the open country with officers to represent them and enforce the local laws is the district or township. In the South, this group is nearly always called a district; but in other parts of the country, it is commonly called a township or simply a town.

A district is just an area of land on which a few hundred or a few thousand people live. It may contain a few square miles, or it may be much larger. It is always an integral part of a larger unit of government called the county. In each district the people elect one or more officers to see that the laws are enforced and to represent them when local laws are being made for them. In the South, the officers are commonly called magistrates and constables. There are usually other officers elected to look after the schools, but these merely administer the laws relating to the local schools and rarely have anything to do with making them.

The township is somewhat like a district in size and character, but it is usually of much more importance in matters of local government. It is found generally in the eastern, the middle western, and the far western states. In New England and other eastern states, its organization preceded that of the county. The counties were organized later, by combining groups

of townships or towns, in order to secure larger units of government. In most other states, the township is considered merely a division of the county, the counties having been organized first and having much more importance in the administration of the local laws.

The Town in New England.—In the New England states, the township, or town, as it is called there, is far more important than the county, so far as the making and enforcing of local laws are concerned. It really makes and administers most of the laws for the people living within its borders. Once a year, and oftener if necessary, the voters come together in a general assembly to discuss matters of importance to all the people, to make such changes in the laws as may be needed, to hear the reports of the officers, and to elect new officers for the following year. Such proceedings occur in towns where the voting population is not too large to assemble conveniently in one hall. The officers consist of from three to nine selectmen or commissioners, a clerk, a treasurer, a constable, a school committee, an assessor, and such others as are required for the public welfare.

Townships in Other Localities.—In the states outside New England where townships exist, the organization is often less complete. In most places there is no annual assembly of the voters. The chief officers, commonly called commissioners, supervisors, or trustees, the name varying in different states, are elected by regular ballot and usually serve longer than one year. This is also true of the clerks, collectors, justices of the peace, constables, and other officers.

In any case, the districts and townships are to be thought of as well-defined areas, where the people have much to do with the administration of the school laws and other laws of that immediate area. In nearly all cases, the township is more thoroughly organized, and has much more responsibility in matters of local government than the district.

A COURTHOUSE IN A SMALL COUNTY SEAT

Justice is administered by the counties under the laws of the state. In these courthouses are also preserved the records of the real estate transactions of the farmers.

The County.—A small number of districts or townships are always grouped together into a county. As a unit of local government the county varies greatly in importance in different parts of the country. In the New England states, and in a few others, it has little to do with the local government aside from taking care of the county buildings, keeping up the roads between the towns, and looking after certain interests connected with some of the local courts. Most of the law-making power and the responsibility of administering the laws rests with the people of the towns or townships. Of course the county levies the taxes for the maintenance of the roads and buildings over which it has supervision, and for paying the expenses of its other administrative duties. All the

necessary county officers are chosen by the people of the county, usually by popular ballot.

The County in the South.—In the southern states and many of the western states the importance of the county is much greater than in the East. A good understanding of the part a county plays in the state government can best be obtained by examining the operation of the government of a county in the South. To begin with, it has an officer called the sheriff, who is elected by the people of all the county. He is the chief administrative officer. In many places he also collects the county and state taxes and performs other important duties. He is usually assisted by a number of deputy sheriffs, whom he appoints.

Then there is a county judge or probate judge, a part of whose duty is to look after the disposition of wills and estates. In some states, he presides over the county court of magistrates when they assemble to appropriate money for bridges, roads, public buildings, and other county improvements. Other officers are a county clerk or recorder, a county jailer, a clerk of the circuit court, a county attorney, a superintendent of public schools, a tax assessor, a coroner, a road commissioner, and a few other minor officers, chosen by the people who live in the county.

Thus, in the South, the county is the unit of local government, all the government affairs centering in the county seat. In the other sections of the country, especially in the East, the larger share of local government rests upon the people living in the townships.

Cities and Villages.—In all counties there are cities

or villages, often both. The cities are law-making centers in themselves and are usually not subject to the laws of the county. They have special charters granted by the legislatures of the states where they are located. These charters give the people certain well-defined rights not accorded to the other people in the county. The villages are small collections of people without any special organization for local government. When the population becomes numerous enough, the people may ask to be incorporated into a self-governing body with privileges like those enjoyed by cities. In most sections of the country such incorporated bodies are called towns. In fact, the name town is rather generally applied to all small cities or large villages.

The State.—All over the land the counties are grouped together into states. These states have their chief executive officers, who see that the laws of the entire state are enforced, and look after the interests of all the people. Each state also makes its own laws, levies its own taxes, and carries on its own public business just as a county or a township does.

State Executive Officers.—In order that the laws may be enforced and the business carried on properly, the people of each state elect a governor, who acts as the chief executive officer. In taking care of the many interests of all the people he has a great many assistants. A lieutenant governor is elected with him to assist in making the laws for the state and to take up the duties of the governor when he is absent in some other state. A secretary of state is also chosen, who keeps a record of all the state's business. Other officers are a state

treasurer, who looks after the public money; an attorney-general, who interprets the state laws and advises the governor and other officers in their execution; a commissioner of agriculture, who promotes farming interests; a superintendent of public instruction, who looks after the public schools; and other officers, who have various duties that concern all the people. In most states these officers are chosen every four years. They are chosen in various ways in different states, but most of them are elected by popular vote.

State Legislative Bodies.—The people of each city or county or group of counties elect men to represent them at the assembly, which meets at the state capital to make laws for the people. This assembly is divided into two groups called the upper house, or senate, and the lower house, or house of representatives. The chief difference lies in the fact that the representativcs are elected by smaller groups of people over the state. Each member of the upper house, called a senator, represents a much larger number of people. These two groups or houses, usually called the legislature or general assembly, make the laws for all the people of the state.

In making the laws, the members who compose the legislature are guided and limited by a few general rules which the people of the state adopted when the state government was first organized. These rules are known as the state constitution, and all the many laws made by the legislature must conform to them. New rules may be added from time to time and old ones may

THE NATIONAL CAPITOL IN WASHINGTON

Meeting place of both Houses of Congress and of the Supreme Court of the United States.

be discarded; but when a constitution is once adopted, it is not likely to change very much unless the plan of government of the whole country changes.

The United States.—All the states and territories taken as a group comprise our great nation, the United States of America. The nation is often called a great family of states, because each state is an integral part of the nation and bears a relation to it something like that which a child bears to the family.

Federal Executive Officers.—Officers are elected to carry on the business of the nation just as they are elected to look after the affairs of the states. These officers are chosen by all the people in the land who have a right to vote. Every fourth year, a president and a vice-president are elected. The president is the chief executive officer. If he is absent from our country, a thing which has occurred only once in all our history, or is unable to attend to his duties, the vice-president acts in his place.

The president needs a great many people to help him in executing the laws and carrying on the other business of all the people. He appoints many of these himself; but the majority are appointed by other officers, many of whom the president selects in person.

The President's Cabinet.—His executive work is grouped under ten different departments, each department having a head officer whom the president appoints. All such appointments have to be confirmed by the senate. Eight of these officers are called secretaries and the other two are called generals. They

are the secretary of state, the secretary of the treasury, the secretary of war, the secretary of the navy, the secretary of agriculture, the secretary of the interior, the secretary of commerce, the secretary of labor, the attorney-general, and the postmaster-general. Under these departments are grouped business activities so important and so varied that an army of experts is required to look after them.

UNITED STATES DEPARTMENT OF AGRICULTURE

Thousands of bulletins are issued to help farmers and farmers' wives to get more from the soil, and to live better.

All our relations with foreign countries are handled by the secretary of state and his assistants in consultation with the president. All matters pertaining to the finances of the nation are looked after by the secretary of the treasury and his helpers. The business of carrying and delivering mails is attended to by the postmaster-general and the thousands of people who help him throughout the country. The attorney-general interprets the laws and advises the president and other officials in their execution. The heads of the other departments with their large forces of assistants take care of the business indicated by the names of their departments.

National Bureaus.—But this is not all. Under each department are grouped many kinds of business not

indicated by the name of the department. These minor activities are cared for by organizations called bureaus or services. Among these are the Bureau of Education, the Weather Bureau, the Bureau of Forestry, the Geologic Survey, the Census Bureau, the Public Health Service, and numerous others. Each of these organizations has a chief officer with many assistants.

Character of Office Holders.—To all these places only men and women of expert knowledge and honorable character are usually appointed. They must look after matters of the very greatest importance to the people of the country. The prosperity of the nation and its standing among the other nations of the earth are to a great extent determined by the character and efficiency of the people who occupy the responsible places as heads of the various departments of the government. It is therefore all-important that they should be people who are honest and capable.

The National Congress.—Then there is the national law-making body or Congress. This body, like the legislatures of the various states, is divided into two groups, the upper house, or senate, and the lower house, or house of representatives. The members of the senate, called senators, are elected every six years in the different states by direct vote of the people. Two are chosen from each state. The members of the lower house, called representatives or congressmen, are elected every two years by direct vote of the people of the congressional district which they represent. The number each state may elect depends on the number

THE PRESIDENT BEFORE CONGRESS *Copr. Harris & Ewing*

President Wilson delivering his great message to Congress, calling for a declaration that war existed between the United States and Germany.

of people in that state. One congressman is usually supposed to represent at present something more than 250,000 people.

Congress makes all the national or federal laws. These laws affect all the people in the nation, and the president is the officer who sees that all the laws are executed or enforced. Whenever there is a conflict between a federal law and a law made by a state or a county or a township, the federal law, if supported by the Supreme Court, must always be obeyed.

The Constitution.—In making laws that apply to all the people in the land, the members of Congress are guided by certain general rules adopted by the people of the thirteen original colonies when they declared their independence and organized the government of the new nation. These rules were written out and adopted by an assembly composed of representatives of all of the thirteen colonies and is known as the Constitution of the United States. Seventeen other rules or amendments have been added to the original list prepared by these men, and more will doubtless be added in the future. But the fact that this great document has served us so long and so well is a great tribute to the wisdom and statesmanship of those who planned it and secured its adoption.

All laws made by Congress, by the legislatures of the different states, by the magistrates or commissioners of the numerous counties, by the councilmen of the many cities, by the selectmen or commissioners of the towns and townships, and by all other law-making bodies in the land, must conform to the spirit of the few

statements that are contained in the Constitution of the United States. This insures to all the people the same rights and privileges, and for all time to come will guarantee to them justice and freedom. The Constitution cannot be changed unless a three-fourths majority of the states agree to the change; and it is very evident that such a majority will never agree to a change that will take away the rights of the people and rob them of their freedom.

Laws and Their Enforcement.—Thus far we have spoken only of the people who make the laws and of the officers who enforce them. We have learned that Congress can make laws that all the people in the nation must obey; that a state legislature can make laws that apply to the people of that state only; that the commissioners or magistrates in a county can make laws that apply only to the people of the county. It has also been learned that in a district, or a township, the constable and other officers enforce the law; that over these, in many instances, is the sheriff, who, with his assistants, enforces it in all the county; that in each state is the governor, who is chief executive of all the counties taken together; and that over all the governors of all the states ranks the president, who occupies the highest office in the nation.

We have learned that each one of these executive officers has many others to help him in enforcing the laws and carrying on the business of the people whom he represents. The officers in the district or township may call on other officers immediately above them. The sheriff may deputize any number of the citizens

of his county to help him, or he may call on the governor to send assistance. The governor has all his office workers to help him and also a large number of men who are known as the state militia. He may call upon the president for aid if necessary. The president has a host of office workers and the army and navy of the United States to help him. And in times of great crises, Congress may add to the strength of the army and navy until practically all the able-bodied men of the country are under the president's command. Thus the military strength of the nation is ready, directly or indirectly, to enforce every law.

The Courts.—We have said nothing about the organizations that explain or interpret the laws to the people and determine whether or not they conform to the constitutions of the various states and the Constitution of the United States. Nor has anything been said about punishing people who violate the laws, or settling misunderstandings among citizens and business organizations. These important matters are attended to by the courts, of which there are many kinds. We shall mention only a few of them.

The Local Courts.—The court nearest to the people in the country or village is usually presided over by a justice of the peace. In larger towns and cities this court has generally developed into what is called a magistrate's or a municipal court.

If someone should do an injury to a farmer, he has a right to call on the officers of the law to protect him and punish the offender. If two farmers cannot agree about the price of a piece of land, or the right to possess

it, they may ask the courts to settle the matter for them.

The first court to which the farmer may appeal is that of the justice of the peace or the magistrate's court. This court consists of the justice or magistrate and the men whom he may select to help him. The farmer may be willing to take the judgment of the magistrate alone, or he may not. If he does not, the magistrate may call upon other men, usually six or twelve, to help him decide the matter. These men constitute a jury, and their decision is made after hearing the evidence on both sides of the question to be settled. In some of the larger cities, the more highly developed municipal court is coming to take the place of the magistrate's court.

The County Courts.—If the matter is of considerable importance, or if it is a claim against the county, the farmer may ask the county court to settle it for him. This court consists of the county judge, and in some states those whom he calls on to help him. In many counties in the South the judge and magistrates constitute the county court.

This type of court is known under many different names and has many different duties. The name varies in different states. Quarterly court, probate court, chancery court, surrogate's court, court of the ordinary, prerogative court are some of them. In the main, we use the term county court to designate those courts that look after wills and estates, attend to the county's business, hear appeals from the magis-

trates' courts. Their jurisdiction does not extend beyond the limits of the county.

The Superior or Circuit Courts.—A third kind of court is within easy reach of the farmer. This is the superior court, often called circuit or district court. It has to do with both civil and criminal matters. By civil matters we mean business and disputes between individuals or estates that are not thought to affect the public welfare. Criminal matters refer to the violations of public laws such as the laws against murder, theft, etc. These courts usually hold regular sessions during the year and cover a territory much larger than a county. In most states special judges are appointed or elected to preside over these special courts.

The State Court of Appeals.—If a matter is decided in the magistrate's court, the persons interested may not be satisfied; they may ask the county court to decide it. If the decision of the county court is unsatisfactory, and if they want a further hearing, they may bring the matter before the circuit or district court. If it is a business of considerable importance, there is opportunity for still further appeal.

There exists in every state a court of appeals or supreme court, which consists of an odd number of judges, usually five or seven, who are either appointed by the governor or elected by direct vote of the people. If a man who has committed a crime is condemned to a severe punishment, and if he thinks he has not had a fair trial, he may appeal to the state supreme court to settle the matter for him. In all such cases the court either confirms the decisions of the court in

which he was last tried or requests that he be given a new trial. This supreme court also determines whether or not the laws made by the state legislature conform to the spirit of the state constitution.

The Federal Circuit and District Courts.—Then there are other federal courts that meet at regular times at various places in the country to look after the business of the United States Government in their special circuits or districts. All the states are grouped into nine different circuits, over each of which a justice of the Supreme Court has judicial authority. Each of these circuits is divided into many smaller circuits or districts, and over the courts held in each district a special federal judge appointed by the president presides. If anyone violates a federal law, such as the law against illicit whiskey making, or if he robs a post office or interferes with the carrying of the mails, he will be brought into a federal court for trial. If he is found guilty he may be fined and released, or he may be sent to one of the federal prisons located at different places in the country. These federal courts are expected to look after the business of the United States and are not expected to interfere with matters involving state laws only.

The Supreme Court of the United States.—Over all the supreme courts of the states is the great Supreme Court of the United States. It has the final word in interpreting the laws of the land and in settling other matters of great importance. It consists of nine judges, called justices, who are appointed by the president for life or during good behavior. It is pre-

sided over by one of the nine, called the Chief Justice, and holds its meetings in a special room in the capitol at Washington.

It is often necessary for the laws passed by Congress to be interpreted or explained to the people. It is also necessary for the people to be told at times whether or not the new laws passed by Congress or the state legislatures are in keeping with the spirit of the Constitution of the United States. The Supreme Court looks after all such matters. When a law is passed by Congress it becomes effective at a certain time, and so continues without any interpretation until somebody raises the question as to whether or not it is constitutional. When such a question is raised, the Supreme Court gives the final answer to it. If it decides that the law does conform to the Constitution, the law stands. If it decides that the law is unconstitutional, that is, that it violates some statement in the Constitution, it at once ceases to be a law. From the decisions of this court there is no appeal except in the case of a death sentence, when the president may pardon the offender. The Supreme Court has other important duties, but these mentioned are the most important.

The People the Real Rulers.—This is but a brief account of the way our great country is governed. It may readily be seen that the people themselves are the real rulers. They choose the magistrates, the selectmen, and nearly all county officers, the governor and most of the other state officers; and they elect the president, the vice-president, and the law-makers.

Every voter in the land, whether man or woman, has a voice in the government; and it is the duty of every voter to exercise his right to vote. When an official is elected, it is the duty of every citizen to support him as long as he is honest and efficient. If he proves to be incompetent, it is his duty to resign and let some abler official take his place. The business of all the people, or even of a few people, is too important to be in the hands of inefficient or dishonest officials.

It is furthermore the duty of every voter, and of every boy and girl who expects to become a voter, to be well informed about the affairs of the county, the state, and the national government. The voters choose the men who make the laws and enforce them. Ignorant people can hardly know what laws are best, or what men are best qualified to enforce them. Only those who have a knowledge of public affairs, and who have an intelligent and unselfish interest in all the people in the land, are qualified to occupy the places of the real rulers of the nation in which we live.

QUESTIONS FOR DISCUSSION

1. Give the names of all the officers of your district or township, and of your county whom you happen to know about.
2. What are the duties of these officers? How are they chosen?
3. What is meant by the "voting age"?
4. Find out how an election is held for school trustee; for sheriff; for governor; for congressman; for president.
5. What is the difference between a primary election and a regular election?
6. Ask some officer or candidate for office what steps he had to take in order to become a candidate.

7. How are the expenses of primary elections met? How are those of regular elections met?

8. Find out what is meant by the "secret ballot." What advantage has this kind of ballot over other methods of election?

9. What do you think ought to be done with a man who will sell his vote? How does vote-selling hurt a community?

10. What is the danger in buying votes? What can be done to prevent it?

11. What is the advantage in having an officer always close at hand?

12. Find out how the salaries of county officials are paid.

13. What are some of the duties of the superintendent of public schools in the county?

14. How is the superintendent chosen? How is his salary paid?

15. If you were a voter, what are some of the things you would like to know about candidates for the following offices:

Magistrate.	Jailer.	County attorney.
Supt. of schools.	Constable.	Coroner.
County surveyor.	Sheriff.	State treasurer.
Governor.	County judge.	President.

16. What good comes from a Fourth-of-July celebration? Choose a committee and make out a program for such a celebration.

17. Discuss the benefits that come from celebrating the following days:

Memorial day.	Labor day.	Columbus day.
Forefathers' day.	Thanksgiving day.	Washington's birthday.

Make out programs for use on these various days.

18. Organize the school into a town meeting and transact the following business:

(*a*) Elect officers for the following year.
(*b*) Appropriate money to repair a street.
(*c*) Make out a budget of expenses for the year.
(*d*) Have a paper read on "How to Beautify the Town."
(*e*) Have a report on "Public Playgrounds."
(*f*) Have another paper read on "How to Have a Healthy Town."
(*g*) Transact such other business as may be necessary.

19. Let two boys have a dispute about the ownership of a piece of property. Let them appeal to the county judge, who hears their complaint, summons a jury and settles their trouble.

20. Divide the school community into various districts, and elect a magistrate for each district. Elect someone to represent the county judge. Assemble the court and transact the following business:

(*a*) Appropriate money to repair a bridge.
(*b*) Pay the claims of a farmer for repairing a road.
(*c*) Levy a tax on the district for school funds.
(*d*) Hear the complaint of a woman who needs county aid.
(*e*) Pay the claim of a farmer whose horse was injured at a bad bridge.
(*f*) Prepare an order for fifty new school desks.
(*g*) Pay a man for hauling material for bridges.

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